

NWS: EHB-6, Software Note 27

DoD: TO 31P1-4-108-630

FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

RADAR PRODUCT GENERATOR (RPG) GROUP SOFTWARE BUILD 6.0

DOPPLER METEOROLOGICAL RADAR WSR-88D



DoD Distribution Statement A - Approved for public release; distribution is unlimited.

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COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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FAA APPROVAL:

James Pritchard

Digitally signed by James Pritchard
DN: CN = James Pritchard, C =
US, OU = AOS-200
Date: 2004.08.18 13:34:00 -05'00'

Date _____

Richard A. Thoma
Director for Technical Operations Support

NWS APPROVAL:



Signature valid

Mark S. Paese

Digitally signed by Mark
S. Paese
DN: cn=Mark S. Paese,
o=DOC/NOAA/NWS,
c=US
Date: 2004.08.20
11:01:35 -04'00'

Date _____

Mark S. Paese
Director, Maintenance, Logistics,
and Acquisition Division

DoD APPROVAL:

BY ORDER OF THE SECRETARY OF THE AIR FORCE

Edward L. Berkowitz

Digitally signed by Ed Berkowitz
DN: CN = Ed Berkowitz, C = US, O =
ROC, OU = Program Branch
Reason: I am approving this document
Date: 2004.08.20 14:39:24 -05'00'

JOHN P. JUMPER, General, USAF
Chief of Staff

Date _____

Edward L. Berkowitz, Chief
Programs Branch
Radar Operations Center
TOMA

1. SUBJECT

Radar Product Generator (RPG) Group Software Build 6.0.

2. PURPOSE

This modification provides instructions and software for loading the new RPG Build 6.0 software. This document is issued under Radar Operations Center (ROC) Engineering Change Proposal (ECP) 0186, RPG and OPUP Software Build 6.0.

Specifically, RPG Software Build 6.0 provides the following enhancements:

- Provides mesocyclone attributes trend data for external systems to display, similar to Cell Trend Display.
- Modifies the Mesocyclone Detection (MD) product to include past and forecast positions of features detected by the new Mesocyclone Detection Algorithm (MDA).
- Adds the Snow Accumulation Algorithm. This algorithm adds six new products: one-hour, user-selectable, and storm total precipitation products for snow depth and snow water equivalent.
- Compresses the Digital Reflectivity, Digital Velocity, and Digital Hybrid Scan products and makes them available for Class 2 requests.
- Security improvements include implementation of a new RPG Security Warning Banner and replacement of TELNET and FTP with secure shell (ssh) and secure FTP (sftp).
- Build 5.0 hard-coded exclusion zones for Enhanced Preprocessing Precipitation algorithm are no longer hard-coded. If the previously hard-coded exclusion zones are appropriate for a given site, they may be entered manually.
- Adds an option to reset precipitation accumulations.
- Removes Archive III.
- Adds antivirus software to the RPG, Master System Control Function (MSCF), and Base Data Distribution Server (BDDS).
- Corrects problem with ingest of Rain Gage Bias Table from AWIPS.
- Corrects Archive II problems on BDDS.
- Changes the Adaptable Parameter screen design.
- Changes lower threshold of High Resolution Enhanced Echo Tops Algorithm from 10 dBZ to 18 dBZ.

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- Changes the lowest height used by the Layer Composite Reflectivity Maximum (LRM) product.

The estimated downtime for the RPG will be approximately 2 hours when no data will be available while Build 6.0 is being loaded.

Steps are included in the procedures to send out free text messages (ftms) notifying the network of the radar down time.

The RPG can continue to operate while the software is being loaded on the MSCF.

For FAA Redundant sites, RPG Software Build 6.0 should first be loaded on one channel and the Distant Master System Control Function (DMSCF). The other channel can be operating on the old software build during this time. However, the channel on the old build must be shut down before Build 6.0 is brought up on the first channel to avoid cross-talk between the different software builds (these steps are covered in the attachments).

For additional information concerning this document, contact the WSR-88D Hotline, Norman, OK; phone number: (800) 643-3363 or (405) 573-8900, or by e-mail at NEXRAD.Hotline@noaa.gov. An electronic copy of this document can be found at the following Internet address:
www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp

3. SITES AFFECTED

See [ATTACHMENT 8](#) for site effectivity.

4. ESTIMATED COMPLETION DATE

This modification must be reported completed no later than 60 days after receipt of this kit.

5. EQUIPMENT AFFECTED

Radar Product Generator Group.

6. SPARES AFFECTED

Not applicable.

7. MODIFICATION ACCOMPLISHED BY

Site electronic systems analysts and/or electronics technicians will accomplish this task. One technician is required to perform these procedures. Operators may assist with [ATTACHMENT 7](#).

8. MATERIALS REQUIRED

The following kit will be required to install RPG Software Build 6.0. NWS sites that have a DoD MSCF will receive a separate kit for the DoD MSCF.

Nomenclature	Qty
CD-ROM, RPG LOAD MEDIA Build 6.0 (two identical CD-ROMs)	2
CD-ROM, EPSS Files (Electronic Performance Support System)	1
CD-ROM, RPG Blockage Files	1
3.5 inch diskette, RPG DEFAULT ADAPTATION DATA or MSCF DEFAULT ADAPTATION DATA	1
* 3.5 inch diskette, DoD BDDS HOST UPDATE	1
Pre-printed labels for Adaptation Data diskettes	3 (FAA: 6)
Formatted 3.5 inch diskettes.	3 (FAA: 6)

* DoD sites only

9. SOURCE OF MATERIALS

The items in paragraph 8 will be shipped to each site by the WSR-88D Radar Operations Center (ROC).

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Cisco Cable # 72-0876-01 or 72-1259-01

* RJ45-DB25(F) adapter #2300027-301

(These tools should be in the kit provided with the ORPG installation.)

* If this adapter is not available, it can be replaced by the RJ45-DB9(F) adapter (Cisco 74-0495-01), DB9 male gender changer, and the 10 foot DB9(F)-DB25(M) serial cable (Black Box EVMBMC-0010). If this combination is used, when referenced below, it should be connected to I/O panel J7 instead of J8. Also, when activated with a tip session, use `/dev/cua/1` instead of `/dev/cua/3`.

If at an MSCF system that has been retrofitted with Frame Relay, then Cisco cable #72-3383-01 may be used, or the RJ45-DB9(F) adapter (74-0495-01) may be used in conjunction with one of the two Cisco cables at the top of this list (72-0876-01 or 72-1259-01).

Normally, the Frame Relay Hub Router is located in close proximity to the Distant MSCF processor (i.e., within reach of the Cisco Cable # 72-3383-01). If it is not within reach, [ATTACHMENT 6](#) must be performed via laptop computer. Detailed instructions are included in [ATTACHMENT 6](#).

11. TIME AND PERSONNEL REQUIRED

Work Phases	NWS Configuration (Hours)	DoD Configuration (Hours)	FAA Configuration (Hours)
Unpacking	0.1	0.1	0.1
Coordination	0.1	0.1	0.1
Installation	MSCF: 1.0 RPG: 1.0 BDDS: 0.7 RPG Router: 0.7 LAN Switch: 0.7	Distant MSCF: 1.0 RPG: 1.0 BDDS: 0.7 RPG Router: 0.7 LAN Switch: 0.7 Frame Relay: 0.7	Distant MSCF: 1.0 First RPG: 1.1 Second RPG: 1.1 RPG Routers: 1.4 LAN Switches: 1.4 Frame Relay: 0.7
Data Restoration	0.1	0.1	0.1
Total Work-hours	4.4	5.1	7.0

12. DOCUMENTS AFFECTED

- a. **Operations Instructions, Radar Product Generation (RPG), Revision 3, dated 30 September 2004**
NWS: EHB 6-526
DoD: AFTO 31P1-4-108-451-1
FAA: TI 6345.1 V50
- b. **Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated 31 August 2004**
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49
- c. **Guidance on Adaptable Parameters, Revision 3, dated 30 September 2004**
NWS: WSR-88D Handbook Volume 4, RPG
- d. **Maintenance Instructions, Wideband Communications (WBC) Group, dated 1 July 2001**
NWS: EHB 6-545, Change 1
DoD: AFTO 31P1-4-108-2, Change 1
FAA: TI 6345.1 V51, Change 1
- e. **System Description, Revision 4, dated 31 March 2003**
NWS: EHB 6-500, Change 3
DoD: AFTO 31P1-4-108-1, Change 3
FAA: TI 6345.1 V1, Change 3

13. VERIFICATION STATEMENT

This modification was successfully installed at Wichita, KS; Little Rock, AR; Sacramento, CA; Beale AFB, CA; Reno, NV; King Salmon, AK; and Kenai, AK.

14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS

Maintain current and previous builds' CD-ROMs, diskettes, and software notes.

Maintain the manuals per guidance provided with each manual.

Keep all training material for reference.

Sites should keep Adaptation Data Diskettes for Build 5.0 (suggest the copy of Build 5 created with the save_adapt_floppy procedure at the start of [ATTACHMENT 2](#)). Dispose of diskettes for all builds previous in accordance with local procedures.

15. PROCEDURES

Perform the following procedures that apply for your office:

- [ATTACHMENT 1](#), MSCF Software Build 6.0 Load Instructions
- [ATTACHMENT 2](#), RPG Software Build 6.0 Load Instructions
- [ATTACHMENT 3](#), BDDS Software Build 6.0 Load Instructions
- [ATTACHMENT 4](#), RPG Router Software Build 6.0 Load Instructions
- [ATTACHMENT 5](#), RPG LAN Switch Software Build 6.0 Load Instructions
- [ATTACHMENT 6](#), Frame Relay Hub Router Software Build 6.0 Load Instructions
- [ATTACHMENT 7](#), MSCF Restoration

Attachments to Perform for Build 6.0							
Attachment Number	1	2	3	4	5	6	7
NWS Office supporting:							
RPG	●	●	●	●	●		●
DoD MSCF without Frame Relay	●						●
DoD MSCF with Frame Relay	●					●	●
FAA MSCF without Frame Relay	●						●
FAA MSCF with Frame Relay	●					●	●
DoD Office supporting:							
RPG		●		●	●		
RPG with BDDS		●	●	●	●		
DoD MSCF	●						●
FAA Office supporting:							
RPG		●		●	●		

Perform attachments in numerical sequence.

It is expected that the RPG, the corresponding MSCF, the corresponding BDDS (if applicable), and the RPG Router will be loaded on the same date. If the MSCF and/or

BDDS processors are located remotely from the RPG, then it is imperative that a load date be agreed upon for all three components by the affected maintainers.

The NEXRAD site Unit Radar Committee (URC) chairman must coordinate downtime with all dedicated users in accordance with Interagency NEXRAD Operation Memorandum of Agreement (MOA). An electronic copy of this agreement can be found at the following Internet address:
<http://www.roc.noaa.gov/moa.pdf>

16. FAA DISTRIBUTION

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

17. CHANGES TO TABLE OF CONTENTS (FAA)

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

To obtain additional copies of this publication, contact Printing and Distribution Team, AMI-700B, at (405) 954-6892.

18. RECOMMENDATIONS FOR CHANGES (FAA)

Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

19. REPORTING INSTRUCTIONS

a. NWS

For each equipment modified, report the completed modification using the Engineering Management Reporting System (EMRS) according to the instructions in NWS Instruction 30-2104, Maintenance Documentation, Part 4 and Appendix E. Include the following information on the EMRS report:

- (1) An Equipment Code of RPG, MSCF, or BDDS in Block 7.
- (2) The appropriate serial number in Block 8.
- (3) A Mod No. of S27 in Block 17a.

Sample EMRS reports are provided as [ATTACHMENT 10](#).

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b. FAA

1. **CHANGES TO RECORDED DATA.** Process a modification record and place this record into the Facility Reference Data File (FRDF) in accordance with the latest Order 6032.1 National Airspace System Modification Program and Order 6030.45 Facility Reference Data File.
2. **STATUS ACCOUNTING.** Providing your equipment is listed in the Facility/Service Equipment Profile (FSEP), the Maintenance Organization has opened a Log Equipment Modification (LEM) record in the Maintenance Management System (MMS) for the system to be modified from paragraph 6, Application.
 - (a) Upon completion of this modification, you are required to close the LEM record and change the Maintenance Action Code (MAC) to:
 - (1) "G" if the modification was completed.
 - (2) "W" if the modification is not applicable.
 - (b) Verify that an "N" is in the "REP COD" field to ensure that the log entry will be upwardly reportable to the national database for National MOD Tracking.
 - (c) The data entry record is to be entered into the LEM as follows:

MMS FIELD NAME DATA ENTRY

FAC/SERV:	NXRAD
LOC IDENT:	55 BA
SHORT NAME:	SYS
ORDER#/SYSTEM:	6345.1
CHAP/SEQ#:	Chap.52
CHG:	57

NOTE

If you have questions about the LEM entries made by the maintenance engineering organization, please call Trudy Green (405) 954-4421.

c. DoD

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

In addition, complete [ATTACHMENT 9](#) and return the information to the ROC by one of the methods below:

- (1) Mailing Address: Program Branch, Configuration Management Team
 WSR-88D Radar Operations Center
 3200 Marshall Ave., Suite 101
 Norman, OK 73072-8028
- (2) FAX Number: (405) 573-3480
 ATTN: Configuration Management Team
- (3) E-mail Address: NEXRAD.CM.comments@noaa.gov
- (4) Web Version: <http://www.roc.noaa.gov/ssb/logistics/completion.asp>

ATTACHMENT 1

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated
31 August 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Initial Conditions:

Be at the MSCF processor. If the MSCF processor and/or the BDDS is located remotely (i.e., DoD or FAA configurations) from the RPG, the System Administrator must coordinate the load date with the MSCF and BDDS locations to determine a mutually agreed upon load date.

Be knowledgeable of user IDs, user passwords, and root passwords for your site. This should include any needed router passwords.

NOTES

The MSCF processor can be loaded with the new software without loss of products to any users. For FAA redundant sites, either channel can be controlling. The radar (RDA and RPG) remains fully operational during the software loading.

This attachment does not apply to the MSCF window on the RPG.

The full system load script will automatically backup user IDs and passwords in case backup data from these account directories need to be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc).

If the following full system software load is aborted on the MSCF for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, Table 4–80. This table has the necessary steps to also relink user accounts to the MSCF applications software so that all users can access the MSCF applications.

Backup/restoral of user account data is not mandatory. However, if there are important logs or graphic screen captures stored in the user account directories that need to be retained, then backup the MSCF user account directories using the procedures specified in

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MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1
V49, Table 4-62. Installer should ensure site's list of user accounts
is available if inadvertently deleted during this load process.

Step	Action/Response	Comments
1	At the MSCF terminal, if not logged in, login as a regular site user (i.e., a site-specific user account).	
2	If there is not an HCI, open one. In a <code>Terminal</code> window, at the <code>user:</code> prompt, enter: hci &<Return>	To open a <code>Terminal</code> window, right click on an open screen, select Tools, then select Terminal.
3	At the HCI, check the black line connecting the tower icon to the RPG box. "Either" or "RPG" must be displayed on this line. For FAA redundant sites, either channel can be controlling.	
4	Close all windows, including those minimized. This leaves the screen empty except for the Common Desktop Environment (CDE) Front Panel at the bottom of the display.	This leaves the user at the CDE level.
<p style="text-align: center;">NOTE</p> <p>Steps 5 and 6 contain methods to halt a system in a normal manner.</p> <p>Should these methods not work and there is no <code>ok</code> prompt, (possible system corruption), use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <Stop>A (i.e., simultaneously press the <Stop> and A keys) after it starts to boot. This stops the boot process. Then proceed to step 7.</p>		
5	Exit the CDE by clicking the EXIT button on the CDE Front Panel (bottom of display) and OK at the <code>Logout Confirmation</code> window.	This leaves the CDE.

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
6	<p>Push the button below the green LED on the front of the MSCF processor to shut down the processor.</p> <p>This should take approximately 20 seconds to complete the shutdown.</p> <p>An <code>ok</code> prompt appears.</p>	Halts the system and the system goes to an <code>ok</code> prompt.
7	<p>At the MSCF, open the CD-ROM drive.</p> <p>Place the CD-ROM labeled <u>RPG LOAD MEDIA Build 6.0</u>. into the CD-ROM drive.</p> <p>Close the cradle.</p>	Your site received two copies of the identical software. Either copy can be used.
8	<p>At the <code>ok</code> prompt, enter: set-defaults<Return></p>	This ensures all Non-Volatile Random Access Memory (NVRAM) settings are returned to default values.
9	<p>At the <code>ok</code> prompt, enter: boot cdrom<Return></p>	This boots the CD-ROM disk. Some disk check errors may be noted; however, they are not relevant at this point. Disregard the <code>hsfs mount failed, trying ufs ...</code> message.
<p style="text-align: center;">NOTES</p> <p>If an error appears that stops the load process, the CD-ROM may be dirty. Remove the CD-ROM by pushing the button on the right side of the drive, clean the surface, and return to Step 7. If another error appears, the CD-ROM is probably defective. Use the second CD-ROM supplied in the load kit and return to Step 7. If any other similar problems occur, call the WSR-88D Hotline at (800) 643-3363.</p> <p>If the load starts and it is then realized that an incorrect entry was made, let the software complete its load through Step 24, and then start this procedure over at Step 6. If the load is aborted while in progress, all user accounts will be lost.</p>		

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
10	<p>In approximately 2 minutes, when the following message appears:</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: 2<Return></p>	
11	<p>When the following message appears:</p> <p>A Distant MSCF connects to a DOD or FAA site. Is this a Distant MSCF? Yes or No [y,n,?,q]</p> <p>For an MSCF on an NWS system, enter: n<Return></p> <p>For an MSCF on a DoD or FAA system, enter: y<Return></p> <p><u>For NWS systems only:</u> The following message will appear: Installing MSCF System...</p>	Indicates Installing MSCF System...
12	<p><u>For NWS systems only:</u> Skip to Step 14.</p> <p><u>For DoD or FAA systems,</u> continue with the next step.</p>	

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
13	<p>When the following message appears:</p> <pre>Does this Distant MSCF have Frame Relay configured?</pre> <p><u>For an MSCF on a DoD or FAA system supporting Frame Relay,</u> enter: y<Return></p> <p><u>For an MSCF on a DoD or FAA system not supporting Frame Relay,</u> enter: n<Return></p> <p>The following message will appear: Installing MSCF System...</p>	
14	<p>When the following message appears:</p> <pre>Please enter the radar's site call letters (type 'help' for list):</pre> <p>Enter the appropriate <u>lower case</u> four-letter site mnemonic: xxxx</p> <p>Enter: xxxx<Return></p>	<p>Enter help<Return> to see a list of site mnemonics (ICAO identifiers) if it is unclear about which mnemonic to use.</p> <p>Space bar will advance to the next page.</p> <p>System responds with the system type, network number and netmask. For example:</p> <pre>System Type is: MSCF Site Name is: kxxx or pxxx Network is: 172.25.xxx.0 Subnet Mask is: 255.255.255.128</pre>
<p style="text-align: center;">NOTE</p> <p>The installation will start, and it will take approximately 23 minutes to complete (up to 40 minutes if MSCF uses Frame Relay). There will be numerous error and warning messages during the final minutes of the installation. These should be ignored. Also ignore any prompts such as "Do you wish to continue?".</p>		

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MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
15	<p>When the following message appears:</p> <pre>Do you want to restore an adaptation archive from CD or floppy for site mnemonic? Yes or No [y,n,?,q]</pre> <p>Enter: y<Return></p>	<p><i>Site mnemonic is kxxx, pxxx, txxx, rxxx, or lxxx.</i></p>
16	<p>When the following message appears:</p> <pre>Choose the adaptation archive media to restore from:</pre> <pre>1 Floppy 2 CD (current install CD)</pre> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<Return></p>	<p>At this time, adaptation data can only be restored from a diskette. Use the diskette labeled <u>RPG DEFAULT ADAPTATION DATA</u>, fourth line <u>Build: 6.0</u>, provided in the kit.</p> <p>For DoD and FAA Distant MSCFs, the diskette will be labeled <u>MSCF DEFAULT ADAPTATION DATA</u>, fourth line <u>Build: 6.0</u>.</p>
17	<p>When the following message appears:</p> <pre>Is the floppy in the drive and ready?</pre> <p>Insert the diskette: <u>RPG DEFAULT ADAPTATION DATA</u>, (or <u>MSCF DEFAULT ADAPTATION DATA</u> for DoD and FAA systems) then enter: y<Return></p>	<p>System starts to mount diskette.</p>

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
18	<p>When the following message appears:</p> <pre>Trying to mount floppy . . . ,</pre> <p>Choose the adaptation file to restore: 1. ./adapt00...<i>site specific info</i> Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<Return> This should take less than 1 minute.</p>	<p>The <i>site specific</i> info will consist of the site mnemonic and the date/time when the adaptation data file was created at the ROC. This diskette is not a site backup. This is the diskette supplied with the kit.</p>
<p style="text-align: center;">NOTES</p> <p style="text-align: center;">System time should be checked/set to ensure accurate system operation. Steps 19 through 21 provide guidance for performing this action prior to system reboot.</p> <p style="text-align: center;">The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the times are within 1000 seconds of each other.</p>		
19	<p>When the following message appears:</p> <pre>Adaptation data successfully retrieved from media. MSCF Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</pre> <p>Enter: 4<Return> to go into the Utility Choice menu, then enter: 1<Return> to get to a shell prompt.</p>	<p>For DoD and FAA systems, the second sentence of the prompt will read:</p> <pre>Distant MSCF Installation Done!</pre>

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MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
20	<p>Verify the displayed date/time is accurate within one minute. Call the WWV at (303) 499-7111 for current time.</p> <p>At the # prompt, enter: date<Return> to refresh the date/time display.</p>	<p>Allows check/set of system time prior to reboot.</p> <p>For FAA and DoD systems the MSCF is the master clock. Set this time as accurately as possible. For NWS systems, the MSCF will get the accurate clock time from the AWIPS.</p>
21	<p>If necessary, set the date/time (GMT) using the following procedure:</p> <p>At the # prompt, enter: date mmddHHMM[cc][yy][.ss]<Return></p>	<p>Reference NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49 Table 4-74, step 3.</p>
22	<p>Once the date/time is accurate, at the # prompt, enter: exit<Return> to return to the main load menu.</p>	
23	<p>When the following message appears:</p> <pre>Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</pre> <p>Enter: q<Return></p>	<p>This will allow selection of a system reboot.</p>
24	<p>When the following message appears:</p> <pre>Do you want to reboot the system? Yes or No [y,n,?,q]</pre> <p>Enter: y<Return></p> <p>This should take approximately 2.5 minutes.</p>	<p>Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.</p>

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>The MSCF is now fully functional and applications are loaded/started. The remaining steps remove the Load Media CD-ROM, set the root password, load the EPSS, and remove the Adaptable Parameters diskette.</p> <p>Once the CDE Login window appears, steps 25 through 27 must be completed within 45 seconds, otherwise the CDE login screen reappears.</p>		
25	<p>At the bottom of the CDE Login window: Click and hold Options. Select Command Line Login.</p> <p>After three lines of comments appear, there is no prompt.</p>	<p>Will enable login as root outside of the CDE.</p> <p>If Login window disappears, this step must be repeated.</p>
26	<p>Enter: <Return></p> <p>A <i>site mnemonic</i> console login: prompt appears.</p>	<p>If the window times out in 1.5 minutes, go back to Step 25.</p>
27	<p>At the <i>site mnemonic</i> console login: prompt, enter: root<Return></p> <p>A # prompt appears.</p>	<p>At this point, the system will not prompt for a root password because it is not yet set.</p>
28	<p>At the # prompt, enter: eject cdrom<Return></p> <p>CD-ROM cradle opens.</p>	
29	<p>Remove the CD-ROM.</p> <p>Close the cradle.</p> <p>Save the CD-ROM in a safe location.</p>	<p>This is the CD-ROM labeled <u>RPG LOAD MEDIA Build 6.0</u>.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
30	At the # prompt, enter: passwd<Return>	The system prompts the user to enter a new password.
31	At the New Password: prompt, enter the desired: root_password<Return>	The system prompts the user to re-enter the new password.
32	At the Re-enter new Password: prompt, re-enter the desired: root_password<Return>	Indicates the password was successfully changed for root.
33	Open the CD-ROM drive at the MSCF. Place the CD-ROM labeled <u>RPG EPSS Files...Use with RPG Build 6.0</u> into the CD-ROM drive. Close the cradle.	
34	At the # prompt, enter: cd /usr/local/bin<Return>	Changes to the directory where local executables are stored.
35	At the # prompt, enter: ./install_epss.ksh<Return>	Starts the script to install the EPSS.
36	When the following message appears: This script loads the EPSS. Please put the EPSS CD in the CD drive now. Do you want to install EPSS on this system's hard drive? Yes or No [y, n, ?,q] Enter: y<Return> This should take approximately 1 minute. When the EPSS installation is complete the # prompt returns.	Installs the EPSS to provide on-line operator help screens. The EPSS icon (RDA tower and shelter with a question mark) will be placed on the left side of the CDE Front Panel on the next login as a normal user.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
37	At the # prompt, enter: eject cdrom<Return> CD-ROM cradle opens.	
38	Remove the CD-ROM. Close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG EPSS Files...Use with RPG Build 6.0.</u>
39	At the # prompt, enter: eject<Return>	This will electronically dismount the diskette and the drive.
40	When the following message appears: /vol/dev/rdiskette0 ... can now be manually ejected Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive. Remove the diskette and place it in a safe location.	The diskette can now be manually ejected. This is the diskette labeled <u>RPG DEFAULT ADAPTATION DATA</u> or <u>MSCF DEFAULT ADAPTATION DATA.</u>
41	At the # prompt, enter: exit<Return> Wait approximately 30 seconds for the system to return to the CDE login window.	
42	Log into the CDE as a regular site user. <u>DO NOT OPEN AN RPG Human Computer Interface (HCI) DISPLAY. The MSCF is not compatible with the RPG until both have Build 6.0 loaded.</u>	When logging into the CDE at the MSCF, an MSCF Display should automatically start.
43	Advise the site operators not to open an HCI until the RPG loading is complete.	

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p><u>DO NOT OPEN AN RPG HCI DISPLAY</u> at the MSCF until Build 6.0 has been completely loaded on the RPG. If an HCI is opened prematurely, the MSCF may show erroneous information and lock up.</p> <p>Two MSCFs windows may open. This is a known issue. Close one MSCF window by clicking on the Close button.</p> <p>All normal user accounts have been set up with a default CDE "look" which includes one <i>Console</i> window, one <i>Terminal</i> window, and one digital clock. Due to variances in monitor sizes and types, the user may need to rearrange these items on the desktop as desired for best viewing. When arranged as desired, log out of CDE to save the new desktop "look." Inform all users that when they start the Electronic Performance Support System (EPSS) with the icon on the Control Panel, they should use Netscape's Edit Preferences option to set both the Fixed and Variable Width fonts to Application (Dt) Size 12. Refer to NWS EHB 6-526, DoD AFTO 31P1-4-108-451-1, FAA TI 6345.1 V50, for specific procedures concerning setup and use of the EPSS.</p> <p>If it is necessary to restore the user accounts (data only), use procedures specified in NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, Table 4-68.</p> <p>Since the RPG is currently running at Software Build 5.0, the MSCF will not be compatible with the RPG. ATTACHMENT 2 must be completed before verifying if the MSCF is operational. Once ATTACHMENT 2 is completed, if the MSCF is not operational, call the WSR-88D Hotline at (800) 643-3363.</p>		
44	Proceed to the next applicable attachment.	

ATTACHMENT 2

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated 31 August 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Initial Conditions:

With the radar operational and collecting data, the RPG is operational and in control of the RDA.

Be knowledgeable of user IDs, user passwords, and root passwords for your site. This should include any needed router passwords.

NOTES

The MSCF is the operating position for the WSR-88D radar. If the MSCF is remote from the RPG, the RPG and MSCF must be loaded on the same date.

If the following full system software load is aborted on the RPG for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, and FAA TI 6345.1 V 50, Table 4-80.

If the screen is blank and this is being performed at the RPG workstation, (with a BDDS client), Raritan user must be selected. FAA and select DoD sites will not see this option as no BDDS is installed on their radars. Move the mouse and click in the edit field, then enter **Raritan<Return>** (no password) or, if a screen saver is not active yet, press the **<Scroll Lock>** key twice quickly to activate the on-screen menus. Select the RPG user channel.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
1	If not logged in, log in as a regular site user. <u>For FAA systems only:</u> Be on the active/controlling RPG channel (either channel may be the controlling channel).	
2	If there is not an HCI, open one. In a <code>Terminal</code> window, at the <code>user:</code> prompt, enter: hci &<Return>	To open a <code>Terminal</code> window, right click on an open screen, select Tools, then select Terminal. The HCI will be used to send out a free text message and to put the RDA into Standby
3	At the HCI, check the black line connecting the tower icon to the RPG box. "Either" or "RPG" must be displayed on this line.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
4	<p>At the HCI, send out a free text message using the <code>Console Messages</code> window under the Applications column.</p> <p>Click on the Console Messages icon.</p> <p>Click on ALL Destinations under the Other category.</p> <p>Click on ALL Destinations under the Class 1 category.</p> <p>Click on the <code>Outgoing Messages:</code> edit block to reposition the cursor.</p> <p>Using the keypad, enter the desired message.</p> <p><u>For NWS and DoD systems:</u> State: The xxxx radar will be down for approximately 2 hours for Build 6.0 software loading. Estimated time back on line will be ____ GMT.</p> <p><u>For FAA systems only:</u> State: The xxxx radar will be down for approximately 2 hours for Build 6.0 software loading. Inactive channel loading starts at (1800) GMT. Estimated outage will be from (1900) to (2100) GMT.</p> <p>Click on the Send button. Response in Feedback line of the HCI will read: <code>Sending Console Message.</code></p> <p>Click on the Close button.</p>	<p><u>For FAA systems only:</u> (1800) is an example time for an 1800 start. The 2-hour down period will not start until loading of the inactive channel is nearly complete. The scheduled 2-hour outage will start approximately 1 hour after starting loading of the inactive channel.</p>
5	<p>Send out any other applicable free text messages, emails, or make phone calls to any other agencies that require notification of your site being off-line.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
6	<p>At the HCI,</p> <p><u>For NWS and DoD systems:</u> In the RDA box, click the Control button.</p> <p>In the RDA State section, click on Standby and Yes.</p> <p>Click on Close to close the RDA Control/Status window.</p> <p><u>For FAA systems only:</u> Go physically to the inactive/non-controlling RPG channel. The inactive/non-controlling RDA is already in Standby. Continue with the next step.</p>	<p><u>For NWS and DoD systems:</u> The RDA will be in standby state with the antenna in park prior to the software being loaded.</p>
7	<p>Take a blank diskette and affix the label as described below (diskettes and labels are provided with the kit).</p> <p style="text-align: center;">RPG Build 5.0 Backup Adaptation Data - Site</p> <p><i>Current Date:</i> _____ <i>Site ID:</i> _____</p> <p>Write the current date and site ID in the spaces provided on the label.</p> <p><u>For FAA systems only:</u> Write the channel number on the label.</p>	<p>Don't use an old diskette with previous adaptation files.</p> <p>Affix the label with all printed data on one side.</p>
8	<p>Open a NEW Terminal window.</p> <p>At the <i>user:</i> prompt, enter: save_adapt_floppy<Return></p>	<p>To open a Terminal window, right click on an open screen, select Tools, then select Terminal.</p> <p>This starts the RPG adaptation data save program.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
9	<p>When the following message appears:</p> <pre> ---> Saving Adaptation Data ---> Insert a new floppy into the floppy drive ---> Hit return when ready </pre> <p>Insert the diskette labeled: <u>RPG Build 5.0 - Backup Adaptation Data - Site</u>, then enter: <Return></p>	This continues the RPG adaptation data save program.
10	<p>When the following message appears:</p> <pre> ---> Mounting floppy ---> Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data . . . Saved adaptation data into rpg . . . </pre> <p>User is returned to the <i>user:</i> prompt.</p>	This completes the RPG adaptation data save for Software Build 5.0.
<p style="text-align: center;">NOTE</p> <p>A check is now made automatically to ensure the new adapt file is on the diskette. If it is not, an error will appear that reads:</p> <pre> --->ERROR: Unable to save adaptation data. Check floppy! Floppy may be bad or write protected. </pre> <p>If this message appears, go back to Step 7, using another diskette. Reuse the label provided, or create a new one with the same information.</p>		
11	<p>At the <i>user:</i> prompt, enter: eject<Return></p>	Electronically dismounts the diskette and insures the file is placed on the diskette.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
12	<p>When the Removable Media Manager window opens and states the floppy can now be manually ejected, Click on OK.</p> <p>The following message also appears:</p> <pre>/vol/dev/rdiskette0 /... can now be manually ejected</pre> <p>Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive.</p> <p>Remove the diskette.</p>	
13	<p>Move the write protect tab to the write protect position.</p> <p>Store this diskette in a safe location.</p>	Diskette will be used during the Merge Program at step 73. It can also be used if Software Build 5.0 is reloaded.
<p style="text-align: center;">NOTES</p> <p>The full system load script will automatically backup user IDs and passwords in case backup data from these account directories need to be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc).</p> <p>Backup/restoral of user account data is not mandatory. If there are important logs or graphic screen captures stored in the user account directories, and if these need to be retained, then backup the RPG user account directories using the procedures specified in NWS EHB 6- 525, AFTO 31P1-4-108-452-1, FAA 6345.1 V49, Table 4-62.</p>		
14	<p>Close all windows and terminals, including those minimized.</p> <p>This leaves the screen empty except for the CDE front panel at the bottom of the display.</p>	

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>Steps 15 and 16 contain methods to halt the system in a normal manner.</p> <p>Should these methods not work and there is no <code>ok</code> prompt (possible system corruption), use the power switch at the rear of the processor and power the processor off for five seconds and back on to reboot it. Then enter <Stop>A (i.e., simultaneously press the <Stop> and A keys) after it starts to boot. This stops the boot process. Proceed to Step 17.</p>		
15	<p>Exit out of Common Desktop Environment (CDE) by clicking the EXIT button on the CDE Front Panel (bottom of display) and OK at the <code>Logout Confirmation</code> window.</p> <p>The CDE login reappears.</p>	This leaves the CDE.
16	<p>Push the button below the green LED on the front of the RPG processor.</p> <p>Wait until the <code>ok</code> prompt appears which will take approximately 80 seconds.</p>	There is no immediate response for approximately 50 seconds. It then takes another 30 seconds to complete the shutdown. The system halts and goes to an <code>ok</code> prompt.
17	<p>Open the CD-ROM drive at the RPG.</p> <p>Place the CD-ROM labeled <u>RPG LOAD MEDIA Build 6.0</u> in the CD-ROM drive.</p> <p>Close the cradle.</p>	Your site received two copies of identical software. Either copy can be used.
18	<p>At the <code>ok</code> prompt, enter:</p> <p>set-defaults<Return></p>	Ensures all NVRAM settings are returned to default values.
19	<p>At the <code>ok</code> prompt, enter:</p> <p>boot cdrom<Return></p>	<p>Boots the CD-ROM disk. Some disk errors may be noted; however, they are not relevant at this point.</p> <p>Disregard the <code>hsfs mount failed, trying ufs...</code> message.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>If an error appears that stops the load process, the CD-ROM may be dirty. Remove the CD-ROM by pushing the button on the right side of the drive, clean the surface, and return to Step 17. If another error appears, the CD-ROM is probably defective. Use the second CD-ROM supplied in the load kit and return to Step 17. If any other similar problems occur, call the WSR-88D Hotline at (800) 643-3363.</p>		
20	<p><u>For NWS and FAA systems:</u> In approximately 2 minutes, when the following message appears:</p> <p>Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: 1<Return></p>	<p>Indicates Installing RPG System...</p>
21	<p><u>For NWS and FAA systems:</u> Proceed to step 28.</p> <p><u>For DoD systems only:</u> Proceed to the next step.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
22	<p><u>For DoD systems only:</u> In approximately 2 minutes, when the following message appears:</p> <p>Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: 4<Return></p> <p>Proceed to the next step.</p>	
23	<p>When the following message appears:</p> <p>Utility Choice: 1 Prompt 2 Upload_Database Enter selection [y,n,?,q]</p> <p>Enter: 2<Return></p>	
24	<p>When the following message appears:</p> <p>Is the floppy in the drive and ready? Yes or No [y,n,?,q]:</p> <p>Insert the diskette labeled <u>DoD BDDS Host Update</u>.</p>	
25	<p>Enter: y<Return></p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
26	<p>The following message appears:</p> <p>Trying to mount floppy . . .</p> <p>After approximately 10 seconds, when the following messages appear:</p> <p>New database successfully retrieved from media</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Wait approximately 5 seconds after receiving the message above, then press the eject button on the diskette drive. Remove the diskette labeled <u>DoD BDDS Host Update</u> from the drive.</p>	
27	<p>In response to the following message:</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<Return></p>	<p>Indicates Installing RPG System...</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
28	<p>When the following message appears:</p> <pre>Please enter the radar's site call letters (type 'help' for list):</pre> <p>Enter the appropriate <u>lower case</u> four letter site mnemonic: xxxx</p> <p>Enter: xxxx<Return></p>	<p>Enter help<Return> to see a list of site mnemonics if it is unclear about which mnemonic to use. Spacebar will advance to the next page.</p> <p>System responds with the system type, network number, and netmask. For example:</p> <pre>System Type is: RPG Site Name is: kxxx, pxxx, txxx, or lxxx Network is: 172.25.xxx.0 Subnet Mask is: 255.255.255.128</pre>
29	<p><u>For NWS and DoD systems:</u> Proceed to step 31 while the software is loading.</p> <p><u>For FAA systems only:</u> Proceed to the next step.</p>	
30	<p><u>For FAA systems only:</u></p> <p>When the following message appears:</p> <pre>Is this channel 1 or 2?</pre> <p>Enter: 1<Return> or 2<Return> Depending on the channel being loaded.</p> <p>Proceed to next step while software is loading.</p>	
31	<p>While the software is loading, cycle the power switch off for five seconds and then back on at the rear of all three communication servers (UD70/170A15, A16 and A17). The A15-A17 labels are midway up on the front right side of the cabinet.</p>	<p>This is necessary to allow for the communication servers to upload new internal operating software if it changed on the RPG processor as part of the new software load. The upload will not actually occur until the RPG processor itself is booted in subsequent steps (but still before the RPG applications software starts).</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>The installation will start and take approximately 21 minutes to complete.</p> <p>If the screen is timed out and this is being performed at the RPG workstation in the Radar Product Generation Processor Communications Assembly (RPGPCA), Raritan user must be selected. Activate mouse and use the on-screen menus to log in as raritan<Return> user (no password) or, if a screen saver is not active yet, press the <Scroll Lock> key twice quickly to activate the on-screen menus. Then select the RPG user channel.</p>		
32	<p>When the following message appears:</p> <pre>Do you want to restore an adaptation archive from CD or floppy for site mnemonic?</pre> <p>Yes or No [y,n,?,q]</p> <p>Enter: y<Return></p>	<p><i>site mnemonic</i> is the site being loaded at the time (site mnemonic kxxx, pxxx, txxx, or lxxx).</p>
33	<p>When the following message appears:</p> <pre>Choose the adaptation archive media to restore from:</pre> <pre>1 Floppy 2 CD (current install CD)</pre> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: 1<Return></p>	<p>At this time, adaptation data can only be restored from a diskette. Use the diskette titled <u>RPG DEFAULT ADAPTATION DATA</u>, fourth line: <u>Build: 6.0</u> provided in the kit.</p> <p>Diskette is selected.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
34	<p>When the following message appears:</p> <pre>Is the floppy in the drive and ready? Yes or No [y,n,?,q]</pre> <p>Insert the <u>RPG DEFAULT ADAPTATION DATA</u> diskette in the floppy drive and then enter: y<Return></p>	<p>System starts to mount diskette.</p> <p>This loads the Build 6.0 default adaptation data only.</p>
35	<p>When the following message appears:</p> <pre>Trying to mount floppy... Choose the adaptation file to restore: 1 ./adapt00001.site specific info Enter numeric selection from Above, q to Quit for ? for Help: [?,??,q]</pre> <p>Enter: 1<Return></p> <p>This should take less than 1 minute.</p>	<p>The <i>site specific info</i> will consist of the site mnemonic and the date/time when the adaptation data file was created at the ROC. This diskette is not a site backup. This is the diskette supplied with the kit.</p> <p><u>For FAA systems only:</u> Channel 1 will have only the rpg1 file displayed. Channel 2 will have only the rpg2 file displayed.</p>
<p style="text-align: center;">NOTES</p> <p>System time will now be checked/set to ensure accurate system operation. Steps 36 through 38 provide guidance for performing this action prior to system reboot. In NWS configurations, the clock will automatically synchronize with AWIPS. In DoD and FAA configurations, the clock will synchronize with the MSCF.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
36	<p>When the following message appears:</p> <pre>Adaptation data successfully received from media RPG Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: 4<Return> to go into the Utility Choice menu, then enter: 1<Return> to get to a shell prompt.</pre>	<p>The default adaptation data is successfully retrieved from the media. The Merge Program will be executed later on in these instructions to restore the site-specific adaptable parameters.</p>
37	<p>Verify the displayed date/time is accurate within one minute. Call the WWV at (303) 499-7111 for current time.</p> <p>At the # prompt, enter: date<Return> to redisplay a new date/time.</p>	<p>Allows check/set system time prior to reboot.</p>
38	<p>If necessary, set the date/time (GMT) using the following procedure:</p> <p>At the # prompt, enter: date mmddHHMM[cc][yy][.ss]<Return></p>	<p>Reference NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V 50, Table 4-77, step 3.</p>
39	<p>Once the date/time is accurate, at the # prompt: enter: exit<Return> to return to the main load menu.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
40	<p>When the following message appears:</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: q<Return></p>	This will allow selection of a system reboot.
41	<p><u>For FAA systems only:</u></p> <p>FIRST TIME THROUGH: Go to the Active Channel RPG.</p> <p>In the RDA box,</p> <ul style="list-style-type: none"> - Click on the Control button. - Click on Standby and Yes. - The RDA goes to Standby. - Click on Close to close the RDA Control/Status window. <p>In the RPG box,</p> <ul style="list-style-type: none"> - Click on the Control button, - Click on Shutdown: Off, and Yes. - The RPG goes to SHUTDOWN. - Click on Close to close the RPG Control window. <p>Return to the Inactive Channel.</p> <p>SECOND TIME THROUGH: Disregard this entire step.</p>	This shuts down the Active Channel (both RDA and RPG) and prevents crosstalk between channels.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
42	<p>When the following message appears:</p> <pre>Do you want to reboot the system?</pre> <p>Enter: y<Return></p> <p>In approximately 2.5 minutes the CDE login window appears.</p>	<p>Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.</p>
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">Steps 43 through 45 must be completed within 45 seconds, otherwise the CDE login screen reappears.</p>		
43	<p>At the bottom of the CDE login window: Click and hold Options. Select Command Line Login.</p> <p>After three lines of comments appear, there is no prompt.</p>	<p>Will enable login as root outside of the CDE. If Login window disappears, step must be repeated.</p>
44	<p>Enter: <Return></p> <p>A <i>site mnemonic</i> console login: prompt appears.</p>	<p>If the window times out in 1.5 minutes, go back to Step 43.</p>
45	<p>At the <i>site mnemonic</i> console login: prompt, enter: root<Return></p> <p>A # prompt appears.</p>	<p>At this point, the system will not prompt for a root password because the password is not yet set.</p>
46	<p>At the # prompt, enter: eject cdrom<Return></p> <p>CD-ROM cradle opens.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
47	Remove the CD-ROM. Close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG LOAD MEDIA Build 6.0</u> .
48	At the # prompt, enter: eject<Return>	This will start the ejection of the RPG Adaptation diskette. The diskette does not automatically eject from the drive.
49	When the following message appears: <code>/vol/dev/rdiskette0 /... can now be manually ejected</code> Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive. Remove the diskette and store it in a safe location.	The diskette can now be manually ejected. This is the diskette labeled <u>RPG DEFAULT ADAPTATION DATA</u> .
50	At the # prompt, enter: passwd<Return>	The system prompts the user to enter a new password.
51	At the <code>New Password:</code> prompt, enter the desired: <code>root_password<Return></code>	The system prompts the user to re-enter the new password.
52	At the <code>Re-enter new Password:</code> prompt, re-enter the desired: <code>root_password<Return></code>	Should indicate the password was successfully changed for root.
53	Open the CD-ROM drive at the RPG. Place the CD-ROM labeled <u>RPG EPSS Files... Use with RPG Build 6.0</u> into the CD-ROM drive. Close the cradle.	
54	At the # prompt, enter: cd /usr/local/bin<Return>	Changes to the directory where local executables are stored.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
55	At the # prompt, enter: ./install_epss.ksh<Return>	Starts the script to install the EPSS.
56	When the following message appears: This script loads the EPSS. Please put the EPSS CD in the CD drive now. Do you want to install EPSS on this system's hard drive? Yes or No [y, n, ?,q] Enter: y<Return> This should take approximately 2 minutes. When the EPSS installation is complete the # prompt appears.	Installs the EPSS to provide on-line operator help screens. The EPSS icon (of an RDA tower and shelter with a question mark) will be placed on the left side of the CDE on the next login as a normal user.
57	At the # prompt, enter: eject cdrom<Return> CD-ROM cradle opens.	
58	Remove the CD-ROM. Close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG EPSS Files... Use with RPG Build 6.0.</u>
59	At the # prompt, enter: exit<Return> System returns to the CDE Login Screen after approximately 30 seconds.	
60	At the RPG processor, when a CDE Login Screen is present, login as the regular site user. Console and Terminal windows should appear. If a Terminal window does not appear, open one.	To open a Terminal window, right click on an open screen, select Tools, then select Terminal.

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
61	<p>Open the CD-ROM drive at the RPG.</p> <p>Place the CD-ROM labeled <u>RPG Blockage Files . . . Use with RPG Build 6.0</u> into the CD-ROM drive.</p> <p>Close the cradle.</p>	
62	<p>Wait for approximately 30 seconds for the File Manager . . . window to appear.</p> <p>Close this File Manager window by clicking in the upper left hand corner on File and Close.</p>	This is done to unlock the keyboard.
63	<p>Click in a Terminal window.</p> <p>At the <code>user:</code> prompt, enter: cd /cdrom/cdrom0<Return></p> <p>A <code>cdrom0 :</code> prompt appears.</p>	Changes the prompt to the CD-ROM directory.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If a warning message is displayed indicating permissions problems, cancel the install process by entering <Ctrl>C. Enter cd<Return> to return to the <code>v1.XX</code> directory.</p>		
64	<p>At the <code>cdrom0 :</code> prompt, enter: ./install_tbd<Return></p> <p>When completed, the following message appears:</p> <p>Finished! Installed the Terrain Blockage Data.</p> <p>Restart RPG Software for Data to take effect.</p>	
65	<p>At the <code>cdrom0 :</code> prompt, enter: cd<Return></p> <p>Changes the prompt to the <code>v1.XX</code> directory.</p>	The <code>v1.XX</code> is the specific internal ROC version number of the software build. It should read something like <code>v1.3</code> or <code>v1.12</code> .

NWS: EHB-6, Software Note 27
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FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
66	At the v1.XX: prompt, enter: eject cdrom<Return> CD-ROM cradle opens.	If a "Device busy" response appears, call the WSR-88D Hotline for recovery assistance.
67	Remove the CD-ROM. Close the cradle. Save the CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG Blockage Files . . . Use with RPG Build 6.0.</u>
68	At the v1.XX: prompt, enter: mrpg shutdown<Return> This should take approximately 10 seconds.	Shuts down the RPG.
69	When the following message appears: RPG processes are notified to shutdown It will be followed by the v1.XX: prompt.	
<p style="text-align: center;">NOTE</p> <p>The adaptation data from the <u>RPG B5.0 - Backup Adaptation Data - Site</u> diskette (made in steps 8 through 13) will now be merged with the adaptation data from the <u>RPG DEFAULT ADAPTATION DATA Build 6.0</u> diskette received in the Software Build 6.0 Load kit from the ROC. The merged Adaptation Data will then be placed on two blank diskettes, one for the site to use and save (<u>Site Diskette</u>), and the second to be returned to the ROC (<u>ROC Diskette</u>).</p>		

NWS: EHB-6, Software Note 27
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ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
70	<p>Take two blank diskettes and affix labels as described below (diskettes and labels are provided with the kit).</p> <p>First diskette:</p> <p style="text-align: center;">RPG Build 6.0 Merged Adaptation Data - Site</p> <p><i>Current Date:</i> _____ <i>Site ID:</i> _____</p> <p>RETAIN FOR SOFTWARE RELOADING UNTIL NEXT RPG SOFTWARE BUILD</p> <p>Second diskette:</p> <p style="text-align: center;">RPG Build 6.0 Merged Adaptation Data - ROC</p> <p><i>Current Date:</i> _____ <i>Site ID:</i> _____</p> <p>SEND THIS DISKETTE TO THE ROC</p> <p>Write the current date and site ID in the spaces provided on the labels.</p> <p><u>For FAA systems only:</u> Write the channel number on the labels.</p>	<p>These diskettes will be used to record the merged adaptation data.</p> <p>These exact titles will be used in the script to clarify which diskette is used when.</p> <p>Affix labels with all printed data on one side.</p>
71	<p>Make sure the write-protect tab is set to the write position to allow writing on diskette (i.e., hole is closed on diskettes).</p>	

NWS: EHB-6, Software Note 27
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FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
72	<p><u>For NWS and DoD systems:</u> At the v1.XX: prompt, enter: merge_adapt xxxx rpg1<Return></p> <p><u>For FAA systems only:</u> If on Channel 1, at the v1.XX: prompt, enter: merge_adapt xxxx rpg1<Return></p> <p>If on Channel 2, at the v1.XX: prompt, enter: merge_adapt xxxx rpg2<Return></p>	<p>This starts the Merge Program for the RPG.</p> <p>xxxx is the appropriate four-letter site mnemonic (in lower case).</p>
73	<p>When the following message appears:</p> <p>Please make sure you have the following items ready before you continue:</p> <ol style="list-style-type: none"> 1. RPG B5.0 - Backup Adaptation Data - Site diskette. 2. RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 diskette. 3. Blank formatted diskette labeled: "RPG B6.0 - Merged Adaptation Data - Site". 4. Blank formatted diskette labeled: "RPG B6.0 - Merged Adaptation Data - ROC". <p>Insert the RPG B5.0 - Backup Adaptation Data - Site diskette, then press Return.</p> <p><u>Insert the diskette labeled: RPG Build 5.0 - Backup Adaptation Data - Site created in Step 13.</u></p> <p>Then enter: <Return></p> <p>This should take less than 1 minute.</p>	<p>Script pauses until <Return> key is pressed.</p>

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
74	<p>When the following message appears:</p> <pre>Copying saved RPG B5.0 - Backup Adaptation Data - Site archive from diskette . . . Remove the RPG B5.0 - Backup Adaptation Data - Site diskette, then press Return.</pre> <p>Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive.</p> <p>Remove the diskette labeled: <u>RPG Build 5.0 - Backup Adaptation Data - Site</u> from the drive. Store this diskette in a safe place if Software Build 5.0 needs to be reloaded on the RPG.</p> <p>Then enter: <Return></p>	<p>Script pauses until <Return> key is pressed.</p>
<p style="text-align: center;">NOTE</p> <p>If the following message appears,</p> <pre>Error copying adapt00040.ICA0.RPG.(Date-Time Group)Z from diskette</pre> <p>then the backup of the sites' adaptation data was not copied. Continue with Step 75 to load the RPG with the Software Build 6.0 default adaptable parameters. Remember that the site default adaptation data values that were stored at the ROC will be the only data used in the merge.</p>		

NWS: EHB-6, Software Note 27
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FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
75	<p>When the following message appears:</p> <p>Insert the RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 diskette, then press Return.</p> <p>Insert the diskette labeled <u>RPG DEFAULT ADAPTATION DATA</u>, fourth line: <u>Build: 6.0</u> that was provided by the ROC.</p> <p>Then enter: <Return></p> <p>This should take less than 1 minute.</p>	<p>Script pauses until <Return> key is pressed.</p> <p>If the wrong diskette is inserted, a message will appear: "Site file not found on diskette."</p>
76	<p>When the following message appears:</p> <p>Copying RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 archive from diskette...</p> <p>Remove the RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 diskette, then press Return.</p> <p>Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive.</p> <p>Remove the diskette labeled <u>RPG DEFAULT ADAPTATION DATA</u>, fourth line: <u>Build 6.0</u>. Save it in a safe place.</p> <p>Enter: <Return></p> <p>Response will be: Data merge complete.</p> <p>This is the expected response for a successful merge.</p>	<p>The two files are merged together to be used as the Build 6.0 adaptation data.</p> <p>Script pauses until <Return> key is pressed.</p> <p>If the merge fails, response will be "Error in data merge. Merge halted." Call the WSR-88D Hotline. The "Could not find entry . . ." messages may then be important in troubleshooting the failure.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>If the following message appears, the diskette containing the RPG DEFAULT ADAPTATION DATA Build 6.0 was not correctly read.</p> <p>RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 file not found on diskette</p> <p>You cannot continue without the RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 diskette.</p> <p>If the RPG DEFAULT ADAPTATION DATA - VERSION: 6.0 diskette is not available, contact the ROC</p> <p>Stop here and call the WSR-88D Hotline immediately.</p>		
77	<p>When the following message appears:</p> <p>Insert blank diskette labeled "RPG B6.0 - Merged Adaptation Data - Site", then press Return.</p> <p>Insert the blank diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - Site</u>.</p> <p>Then enter: <Return></p> <p>This should take less than 1 minute.</p>	<p>Copies the merged Software Build 6.0 adaptation data to a diskette for the site to use.</p> <p>Script pauses until Return key is pressed.</p>

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>If (Site) diskette cannot be written to, the following will appear and the merge script will abort.</p> <pre>cp: cannot create /floppy/floppy0/ adapt 00050.site.rpg1.????????-??-??-??: read-only file system</pre> <p>Error copying adapt00050.site.rpg1.????????-??-??-?? to diskette</p> <p>Return to Step 72 and redo the entire merge sequence with the new diskette. Make a hand-written label that matches the pre-printed label from the “bad” diskette.</p>		
78	<p>When the following message appears:</p> <pre>Copying merged archive to RPG B6.0 - Merged Adaptation Data - Site diskette...</pre> <p>This diskette will be used during installation of the latest RPG software. Remove the diskette, then press Return.</p> <p>Wait approximately 5 seconds to ensure the drive’s write head is no longer engaged, then press the eject button on the diskette drive.</p> <p>Remove the diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - Site</u>. This diskette will be used later in the load procedures to restore the merged adaptation data to the RPG.</p> <p>Then enter: <Return></p>	<p>The date/time group in the file name will be 01 September 2003, 00-00-00Z. This date/time represents the Merge Program version, not the date/time the files were made.</p> <p>Script pauses until <Return> key is pressed.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
79	<p>When the following message appears:</p> <p>Insert blank diskette labeled "RPG B6.0 - Merged Adaptation Data - ROC", then press Return.</p> <p>Insert the blank diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - ROC</u>.</p> <p>Then enter: <Return></p> <p>This should take less than 1 minute.</p>	<p>Script pauses until <Return> key is pressed.</p>
80	<p>When the following message appears:</p> <p>Copying merged archive to RPG B6.0 - Merged Adaptation Data - ROC diskette...</p> <p>This diskette is to be delivered to the ROC. Remove the diskette, then press Return.</p> <p>Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive.</p> <p>Remove the diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - ROC</u>.</p> <p>Then enter: <Return></p>	<p>Script pauses until <Return> key is pressed. Once it is pressed, the script is finished and the command line prompt will appear.</p>

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>If the "ROC" diskette cannot be written to, the following will appear and the script will abort.</p> <pre>cp: cannot create /floppy/floppy0/ adapt 00050.site.rpg1.????????-??-??-??: read-only file system</pre> <p>Error copying adapt00050.site.rpg1.????????-??-??-?? to diskette</p> <p>If the error messages appear for the second diskette, take the good diskette, "Site", and copy it onto a new diskette. Use a site desktop computer and disk copy commands. Make a hand-written label matching the pre-printed label from the "bad" diskette. Call the WSR-88D Hotline if necessary.</p>		
81	At the v1.XX: prompt, enter: restore_adapt_floppy<Return>	
82	When the following message appears: ->Restoring from Floppy ->Insert the adaptation backup floppy into the floppy drive ->Hit return when ready <u>Insert the diskette labeled: RPG Build 6.0 - Merged Adaptation Data - Site.</u> Then enter: <Return>	

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
83	<p>When the following message appears:</p> <pre> ->Mounting floppy ->Restoring RPG adaptation data from /floppy/floppy0 Restoring adaptation data... Restored adaptation data from rpg: /floppy/floppy0/ adapt00060.xxxx.rpg.date-time.Z. The restored adaptation data will be used on the next application startup. The user is returned to the v1.XX: prompt. This should take less than 1 minute. </pre>	<p>The Software Build 6.0 merged adaptation data has now been restored onto the RPG.</p> <p>The merge software output passes the data to the MSCF through this step.</p>
84	<p>At the v1.XX: prompt, enter: eject<Return></p>	
85	<p>When the Removable Media Manager window opens and states the floppy can now be manually ejected, click on OK. The following message also appears:</p> <pre> /vol/dev/rdiskette0/... can now be manually ejected. Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive. Manually remove the diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - Site</u>. </pre>	
86	<p>At the v1.XX: prompt, enter: mrpg startup<Return></p>	<p>This starts up the RPG with Software Build 6.0 merged adaptation data.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
87	<p>When the following message appears:</p> <p>RPG startup completed</p> <p>It will be followed by a <code>v1.XX:</code> prompt.</p> <p>Enter: hci &<Return></p> <p>This opens an RPG HCI window.</p>	
88	The RPG is now operational. If the RPG is not operational, call the WSR-88D Hotline at (800) 643-3363.	For those sites with a BDDS, Archive II LDM Data box and data flow line will be red until the BDDS load is completed in ATTACHMENT 3 .
89	At the HCI, click on the Products button under the RPG Group. Click on the Algorithms button. The Algorithms window appears.	
90	Within the Algorithms window, locate the Adaptation Item selection bar. Click on the small arrow to the right of the Combined Shear Adaptation Item. Scroll down to the Velocity Dealiasing - Multi-PRF item. Click on this title to make the Velocity Dealiasing - Multi-PRF Algorithm appear.	
91	Click on the Padlock button and then click on the URC button and enter the URC password. The fields will become sensitized and available for edit.	
92	<p>Edit the second and third fields in the list by entering the following values:</p> <p>Threshold (Fix Trip Minimum Bin): -7<Return></p> <p>Threshold (Fix Trip Maximum Bin): -3<Return></p>	
93	Click on the Save button to save the changes, then click on Yes in the warning_popup window.	
94	Click on the <code>Baseline:</code> Update button to update the database, then Click on Yes in the warning_popup window.	

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
95	Click on the Close button in the Algorithms window, and click on the Close button in the RPG Products window to close these windows.	
96	In a Terminal window, at the v1.XX: prompt, enter: save_adapt_floppy<Return>	
97	When the following messages appear: --->Saving Adaptation Data --->Insert a new floppy into the floppy drive --->Hit return when ready Insert the diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - Site</u> . Please ensure that the write protection is off (hole is closed).	
98	Enter: <Return>	
99	The following messages will appear: --->Mounting floppy --->Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data... Saved adaptation data into rpg . . . When the v1.XX prompt reappears, enter: eject<Return>	
<p style="text-align: center;">NOTE</p> <p>A check is now made automatically to ensure the new adapt file is on the diskette. If it is not, an error will appear that reads:</p> <p style="text-align: center;">--->ERROR: Unable to save adaptation data. Check floppy! Floppy may be bad or write protected.</p>		

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
100	<p>When the Removable Media Manager window opens and states the floppy can now be manually ejected, Click on OK.</p> <p>The following message also appears:</p> <pre>/vol/dev/rdiskette0 /... can now be manually ejected</pre> <p>Wait approximately 5 seconds to ensure the drive's write head is no longer engaged, then press the eject button on the diskette drive.</p> <p>Remove the diskette.</p>	
101	On the diskette just removed, move the write protect tab to the write protect position (hole is open).	
102	Repeat steps 96 through 101 using the diskette labeled: <u>RPG Build 6.0 - Merged Adaptation Data - ROC</u> as a substitute for the Site diskette in Step 97.	
103	<p><u>For FAA systems only:</u></p> <p>FIRST TIME THROUGH: The Inactive/ Noncontrolling channel is now loaded with Software Build 6.0. The RPG software State is OPERATE with a green background, but the RPG box is red as there is no communication with the other RPG. The Adapt Times box should be red with MISMATCH identified.</p> <p>Return to step 7 to load the other channel currently on the old build.</p> <p>SECOND TIME THROUGH: Both channels have Software Build 6.0 loaded. Continue on with the next step.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 2 (Continued)

RPG SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
104	<p>The RDA is in standby.</p> <p><u>For NWS and DoD systems:</u> Click on the RDA Control button. Click on Operate and Yes. Click on Close to close the RDA Control/ Status window.</p> <p><u>For FAA systems only:</u> Be on the Active/Controlling channel. In the lower right hand corner of the HCI, if the Adapt Times: states MISMATCH with a red background, click on MISMATCH and Yes.</p> <p>Click on the RDA Control button. Click on Operate and Yes. Click on Close to close the RDA Control/ Status window.</p>	The radar is now operating.
105	For sites with distant MSCF locations, notify the MSCF site and any agency-specific offices that Software Build 6.0 has been successfully loaded on the RPG(s).	
106	<p>The MSCF (or distant MSCF) can now be restored. Bring up the HCI, as both the RPG(s) and MSCF have Software Build 6.0 software loaded.</p> <p><u>For FAA systems only:</u> This step is not necessary for the inactive, non-controlling channel.</p>	
107	<p>Send the diskette(s) labeled: <u>RPG B6.0 - Merged Adaptation Data - ROC</u> to the following address:</p> <p>Radar Operations Center Configuration Management ATTN: Chris Hunt 3200 Marshall Ave Norman, OK 73072-8028</p>	This data provides the ROC with information to support future builds.
108	Continue with the next attachment applicable to your site.	

ATTACHMENT 3

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated
31 August 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Initial Conditions:

This procedure can be performed while the radar is operational.

Be knowledgeable of user IDs, user passwords, and root passwords for your site.
This should include any needed router passwords.

NOTE

If the following full system software load is aborted on the BDDS for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, Table 4-80 after the full software load is successfully completed. If this is a new replacement processor or fixed disk, user accounts must also be reestablished after the load in accordance with NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, Table 4-80.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>If this is being performed at a local BDDS workstation (installed in RPG cabinets), Raritan user Channel 2 (Local BDDS) must be selected. Move mouse and click on the edit field, then enter Raritan<Return> (no password) or, if a screen saver is not active yet, press the <Scroll Lock> key twice quickly to activate the on-screen menus. Select the BDDS user channel. Login on the screen lock with the site-specific password.</p> <p>The full system load script will automatically backup user IDs and passwords should backup data from these account directories be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc) in-place so backup/restoral of user account data is not mandatory.</p>		
1	Depress the <Scroll Lock> button twice on the keyboard, and the Raritan Login screen or the Selection Menu will appear.	
2	If a Raritan Login screen appears, enter: raritan<Return> (password is not required)	The Selection Menu will appear.
3	Under normal conditions, the BDDS processor is channel id number 2. Using the ↑ and ↓ keys on the keyboard to highlight the BDDS channel, enter: <Return> to invoke the selection.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>Steps 4 through 6 contain methods to halt a system in a normal manner. Should these methods not work (possible system corruption), press the button on the front of the processor assembly (below green LED) and wait 30 seconds. If the system still will not shutdown, use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <Stop>A (i.e., simultaneously press the <Stop> and A keys) after it starts to boot to stop the boot process. Then proceed to step 7.</p>		
4	If at the BDDS CDE Login Screen, proceed to step 6. If within the BDDS CDE continue with the next step.	
5	Exit out of Common Desktop Environment (CDE) by clicking the EXIT button on the CDE Front Panel (bottom of display) and OK at the Logout Confirmation window.	Leave the CDE.
6	<p>Push the button below the green LED on the front of the BDDS Processor. Proceed to step 7.</p> <p>It takes approximately 20 seconds to complete the shutdown.</p> <p>An ok prompt appears.</p>	Halts the system and the system goes to an ok prompt.
7	<p>At the BDDS Processor, open the CD-ROM drive.</p> <p>Place the CD-ROM labeled <u>RPG LOAD MEDIA Build 6.0</u> in the CD-ROM drive.</p> <p>Close the cradle.</p>	
8	At the ok prompt, enter: set-defaults<Return>	This ensures all NVRAM settings are returned to default values.
9	At the ok prompt, enter: boot cdrom<Return>	This boots the CD-ROM disk. Some disk check errors may be noted; however, they are not relevant at this point. Disregard the <code>hsfs mount failed, trying ufs ...</code> message.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>If the load starts and it is then realized that an incorrect entry was made, let the software complete its load and then start this procedure over from the beginning. If the load is aborted while in progress, all user accounts will be lost.</p>		
10	<p>In approximately 2 minutes when the following message appears:</p> <pre>Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</pre> <p>Enter: 3<Return></p>	<p>Indicates Installing BDDS System...</p>
11	<p>When the following message appears:</p> <pre>Please enter the radar's site call letters (type 'help' for list):</pre> <p>Enter the appropriate <u>lower case</u> four-letter site mnemonic: xxxx</p> <p>Enter: xxxx<Return></p>	<p>Enter help<Return> to see a list of site mnemonics if it is unclear about which mnemonic to use.</p> <p>System responds with the system type, site name, network number, and netmask. For example:</p> <pre>System Type is: BDDS Site name is: kxxx or pxxx Network is: 172.25.xxx.0 Subnet Mask is: 255.255.255.128</pre>
<p style="text-align: center;">NOTES</p> <p>The installation will start and take approximately 21 minutes to complete.</p> <p>System time should be checked/set to ensure accurate system operation. Steps 12 through 14 provide guidance for performing this action prior to system reboot.</p>		

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
12	<p>When the following message appears:</p> <pre> BDDS Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: 4<Return> to go into the Utility Choice menu, then enter: 1<Return> to get to a shell prompt.</pre>	
<p style="text-align: center;">NOTES</p> <p>Perform the next step even though the BDDS will synchronize its time with the AWIPS for NWS, or MSCF for DoD.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		
13	<p>Verify the displayed date/time is accurate within one minute. Call the WWV at (303) 499-7111 for current time.</p> <p>At the # prompt, enter: date<Return> to refresh the date/time display.</p>	Allows check/set of system time prior to reboot.
14	<p>If necessary, set the date/time (GMT) using the following procedure:</p> <p>At the # prompt, enter: date mmddHHMM[cc][yy][.ss]<Return></p>	Reference NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA Order 6345.1 V49, Table 4-77, step 3.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
15	Once the date/time is accurate, at the # prompt, enter: exit<Return> to return to the main load menu.	
16	When the following message appears: Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]: Enter: q<Return>	This will allow selection of a system reboot.
17	When the following message appears: Do you want to reboot the system? Enter: y<Return>	Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">In approximately 2 minutes, the BDDS will be fully functional and applications will be loaded/started. The BDDS is then able to perform its prime function. The remaining steps are for removing the CD-ROM, setting the root password, and restoring user accounts if desired.</p>		
18	At the bottom of the CDE login window: Click and hold Options . Select Command Line Login . After three lines of comments appear, there is no prompt.	Will enable login as root outside of the CDE.
19	Enter: <Return> A <i>site mnemonic</i> console login: prompt appears.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
20	At the <i>site mnemonic</i> console login: prompt, enter: root<Return> A # prompt appears.	At this point, the system will not prompt for a root password because it is not yet set.
21	At the # prompt, enter: eject cdrom<Return> CD-ROM cradle opens.	
22	Remove the CD-ROM. Close the cradle. Save CD-ROM in a safe location.	This is the CD-ROM labeled <u>RPG LOAD MEDIA Build 6.0</u> .
23	At the # prompt, enter: passwd<Return> Changes to <i>New Password:</i> prompt.	Prompts the user to enter a new password.
24	At the <i>New Password:</i> prompt, enter the desired: root_password<Return>	Prompts the user to re-enter the new password.
25	At the <i>Re-enter new Password:</i> prompt, re-enter the desired: root_password<Return>	Should indicate that the password was successfully changed for root.
26	At the # prompt, enter: exit<Return> System returns to the CDE login window after approximately 10 seconds.	If it is not necessary to restore any backed-up user accounts (data only), then this procedure is theoretically complete; however, the Note following Step 29 provides information for setting up the CDE "look" when logging into a normal user account and into the CDE. If it is necessary to restore user accounts (data only), follow NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA Order 6345.1 V49, Table 4-68.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
27	The BDDS is now operational. If the BDDS is not operational, call the WSR-88D Hotline at (800) 643-3363 for assistance.	
28	<p>Close out the BDDS channel.</p> <p>Press the <Scroll Lock> key twice quickly to activate the on-screen menu.</p> <p>Scroll to the RPG user channel and press <Return>.</p> <p>This will return the user to the RPG user channel.</p>	
29	Continue with the next attachment applicable to your site.	
<p style="text-align: center;">NOTE</p> <p>All normal user accounts have been set up with a default CDE “look” which includes one <code>Console</code> window, one <code>Terminal</code> window, and one digital clock. Due to variances in monitor sizes and types, the user may need to rearrange these items on the desktop as desired for best viewing. When arranged as desired, log out of CDE to save the new desktop “look.”</p>		

ATTACHMENT 4

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated
31 August 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Tools Required:

Cisco Cable # 72-0876-01 or 72-1259-01
RJ45-DB25(F) adapter #2300027-301 *
(These tools should be in the kit provided with the RPG installation. This is a light blue flat cable approximately 8 feet long with a beige adapter at one end.)

* If this adapter is not available, it can be replaced by the RJ45-DB9(F) adapter (Cisco 74-0495-01), DB9 male gender changer, and the 8 foot DB9(F)-DB25(M) serial cable (Black Box EVMBMC-0010). If this combination is used, when referenced below, it should be connected to I/O panel J7 instead of J8. Also, when activated with a tip session, use /dev/cua/1 instead of /dev/cua/3.

Initial Conditions:

The RPG Router UD70A2 is installed and in normal operating mode located in the RPGPCA cabinet UD70. The RPG Router has been configured previously. For initial configuration, follow the procedures in NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, paragraph 6.6.5.

This procedure can be performed while the radar is operational.

You MUST know your router passwords to complete this attachment.

This procedure is designed to accommodate any site, regardless of whether the site has installed Mod Note 74, Embedded Console Server. In the event the site has completed Mod Note 74, Embedded Console Server, steps are included in this procedure to disconnect the serial cable (70/170W315C) connected to the Console Port of the RPG Router. The procedure also includes the steps to reconnect this serial cable once the Router is configured.

For FAA only: Perform this attachment first on the inactive channel router while the other channel is operational. Then switch channels and repeat this attachment on the other (now inactive) channel.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>The router must now be upgraded for compatibility with RPG Software Build 6.0. <u>It is critically important to complete ATTACHMENT 2 prior to performing this attachment.</u></p> <p>Prerequisite for using the Radar Product Generation Processor Communications Assembly (RPGPCA) for setup: The Router (UD70A2) is installed and connected to the LAN Switch (UD70A13) in its normal manner. The RPG processor is fully loaded, operational and connected to the LAN Switch (UD70A13) in its normal manner within the RPGPCA cabinet UD70.</p> <p>The next step requires input of the site-specific IP address from the RPG processor. If this number is not known, in a <code>Terminal</code> window, at any prompt enter the following: more /etc/hosts<Return> and put the <i>Third Octet Subnet</i> number (found near the top of the hosts file) in the blank below:</p> <p style="text-align: center;">172.25._____.1</p> <p>For FAA Channel 2, the IP address will have the form:</p> <p style="text-align: center;">172.25._____.71</p> <p>For FAA sites, recommend starting with the Inactive/Non-controlling channel.</p>		
1	If Mod Note 74, Embedded Console Server, has been installed, disconnect the serial cable (70/170W315C) from the CON port at the front of the Cisco 3600 Series Router at the RPG.	
2	<u>All sites:</u> Plug the Cisco cable into the CON port at the front of the Cisco 3600 Series Router.	See Tools Required list at the beginning of ATTACHMENT 4 .
3	Attach the RJ45–DB25(F) adapter to the free end of the Cisco cable.	
4	Plug the free end of the RJ45–DB25(F) adapter into the I/O Panel J8 port. This port is in the bottom eight inch section of the left hand cabinet as you face the back of the cabinets.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
5	<p>In a NEW <code>Terminal</code> window, at a <code>user:</code> prompt, enter: tip -9600 /dev/cua/3<Return></p> <p>The feedback <code>connected</code> appears.</p>	To open a <code>Terminal</code> window, right click on an open screen, select Tools, then select Terminal.
6	<p>After the <code>connected</code> feedback appears, enter: <Return></p> <p>to finish establishing the connection.</p> <p>A <code>Password:</code> prompt should appear. If there is no prompt, verify the routing of the J8 I/O panel reference NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, Figure FO7-4, titled "RPG-PCA Data Cables". Cable W253 goes from J8 to PCI board 2 port 3 (fourth one down on the bottom).</p>	
<p style="text-align: center;">NOTE</p> <p>For simplicity with this procedure the possible <i>hostname</i> (rtr, rtr1 if FAA Channel 1, or rtr2 if FAA Channel 2) is referred to as <code>rtr</code> for the remainder of this procedure. When an entry requires the router <i>hostname</i>, the user needs to enter the appropriate hostname as directed by the procedure.</p>		
7	<p>At the <code>Password:</code> prompt, enter: <code>site_password<Return></code></p> <p>If this is a new router that may have been previously tested by NRC, it will either have no password set for the CONSOLE port or will use a default password of cisco.</p> <p>A <code>rtr></code> prompt should appear.</p>	Enter the actual password for site, not the words "site_password."
<p style="text-align: center;">NOTE</p> <p>If the <code>password:</code> prompt reappears, then the wrong password was entered. After three wrong attempts, press the Return key to return to another <code>password:</code> prompt sequence. If the correct password cannot be found, call the WSR-88D Hotline and obtain the two pages instructions titled <u>Lost CISCO Router Password</u>.</p>		

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
8	At the <code>rtr></code> prompt, enter: enable<Return>	
9	At the <code>Password:</code> prompt, enter: <code>site_password<Return></code> If this is a new router that may have been previously tested by NRC, it will either have no password set for the “enable” level or will use a default password of cisco . A <code>rtr#</code> prompt appears.	
<p style="text-align: center;">CAUTION</p> <p style="text-align: center;">Upon completion of steps 10 through 12, if power is removed without successful completion of steps 13 through 18 the firmware within the Router <u>will become corrupted</u> (signified by a <code>router:</code> prompt) and a new router must be ordered.</p>		
10	At the <code>rtr#</code> prompt, enter: erase startup-config<Return>	This erases the old configuration files.
11	If the following message appears: Erasing the nvram filesystem will remove all files! Continue? [confirm] Enter: <Return> [OK] will appear.	
12	Wait for feedback: Erase of nvram: complete and the <code>rtr#</code> prompt reappears.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>The command line entry for Step 13 below includes a colon after the word flash (flash:). The colon must be included in the command string.</p>		
13	<p>At the <code>rtr#</code> prompt,</p> <p><u>For NWS, DoD, or FAA Channel 1 only:</u> enter: copy tftp://172.25.===.1/c3640.bin flash: <Return></p> <p><u>For FAA Channel 2 system only:</u> enter: copy tftp://172.25.===.71/c3640.bin flash: <Return></p> <p>Enter the correct subnet referencing the hosts file.</p>	<p>The IP address is the RPG processor IP Address and === is the site-specific subnet number. Refer to note before step 1 for the site-unique subnet ID.</p> <p>This will start the copy process of the new Cisco operating system from the RPG newly loaded with Build 6.0.</p>
14	<p>When the following message appears:</p> <p><code>Destination filename [c3640.bin]?</code></p> <p>Enter: <Return></p>	
15	<p>When the following message appears:</p> <p><code>%Warning:There is a file already exist- ing with this name Do you want to over write? [confirm]</code></p> <p>Enter: <Return></p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
16	<p><u>For NWS, DoD, and FAA Channel 1 only:</u> When the following message appears:</p> <pre>Accessing tftp://172.25.===.1/ c3640.bin... Erase flash: before copying? [confirm].</pre> <p>Enter: <Return></p> <p><u>For FAA Channel 2 only:</u> When the following message appears:</p> <pre>Accessing tftp://172.25.===.71/ c3640.bin... Erase flash: before copying? [confirm].</pre> <p>Enter: <Return></p>	
17	<p>When the following message appears:</p> <pre>Erasing the flash filesystem will remove all files! Continue? [confirm]</pre> <p>Enter: <Return></p> <p>The message Erasing device... will be displayed.</p>	<p>This erases the old operating system and makes room for the new operating system.</p>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
18	<p>Wait for approximately 40 seconds while the older file is erased and the newer file loads.</p> <p>When the following messages appear:</p> <pre>Verifying checksum...OK xxx bytes copied . . . rtr#</pre> <p>If Verifying checksum...OK does not appear, repeat steps 13 through 18 before continuing.</p>	
19	<p>Cycle power to the Router (A2) by manually turning the power switch Off for five seconds, and then back On. (The power switch is on the back of the router, right hand side).</p> <p>Once power is returned to the router, it reloads the default software taking approximately 45 seconds. When complete, the last line of feedback states:</p> <pre>--- System Configuration Dialog ---</pre>	
20	<p>The following message may appear at certain sites:</p> <pre>Press Return to get Started!</pre> <p>If the above message appears, press <Return> and skip to Step 24.</p> <p>If this message does not appear, continue to the next step.</p>	
<p style="text-align: center;">NOTE</p> <p>Throughout this procedure, the router state is changed and feedback messages are presented while the user is trying to complete entries. To return to an entry prompt, press <Return>.</p>		

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
21	<p>The following message may appear at certain sites:</p> <pre>Would you like to enter initial configuration dialog? [yes/no]:</pre> <p>If the above message appears, Enter: n<Return></p> <p>If the above message does not appear, proceed to the next step.</p>	
22	<p>The following message may appear at certain sites:</p> <pre>Would you like to terminate autoinstall? [yes]:</pre> <p>If the above message appears, Enter: <Return></p> <p>If the above message does not appear, proceed to the next step.</p>	
23	<p>State Changes will be noted. Wait approximately 30 seconds until the State Changes stop, then enter: <Return> to continue.</p> <p>The <code>Router></code> prompt appears.</p>	
24	<p>At the <code>Router></code> prompt, enter: enable<Return></p> <p>Prompt changes to <code>Router#</code>.</p>	
25	<p>At the <code>Router#</code> prompt, enter: config t <Return></p> <p>Prompt changes to <code>Router(config)#</code>.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
26	At the <code>Router(config)#</code> prompt, enter: no logging console<Return>	This turns off the display of the state change comments.
27	At the <code>Router(config)#</code> prompt, enter: bridge irb<Return>	
28	At the <code>Router(config)#</code> prompt, enter: bridge 1 protocol ieee<Return>	
29	At the <code>Router(config)#</code> prompt, enter: bridge 1 route ip<Return>	
30	At the <code>Router(config)#</code> prompt, enter: int bvi1<Return> Prompt changes to <code>Router(config-if)#</code> .	
31	Enter the IP address command string, dependent on system and/or channel. <u>For NWS, DoD, or FAA Channel 1 only:</u> At the <code>router(config-if)#</code> prompt, enter: ip address 172.25.===.7 255.255.255.128<Return> Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.	This configures the router for the network connection to the RPG. Note: There is a “.7” instead of a “.1” after the site ID in this command string.
32	<u>For FAA Channel 2 only:</u> At the <code>router(config-if)#</code> prompt, enter: ip address 172.25.===.77 255.255.255.128<Return> Where === is the site-specific subnet ID (see host file). Refer to note before step 1 for the site-unique subnet ID.	This configures the router for the network connection to the RPG. Note: There is a “.77” instead of a “.71” after the site ID in this command string.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
33	At the Router (config-if) # prompt, enter: exit<Return> Prompt changes to Router (config) #.	
34	At the Router (config) # prompt, enter: int f0/0<Return> Prompt changes to Router (config-if) #.	This starts the configuration of the Ethernet port.
35	At the Router (config-if) # prompt, enter: bridge-group 1 <Return>	
36	At the Router (config-if) # prompt, enter: no shutdown<Return>	
37	At the Router (config-if) # prompt, enter: end<Return> Prompt changes to Router#.	
38	At the Router# prompt, enter: write mem<Return> to save the entries. Wait a few seconds for the router to update and the Router# prompt returns.	
39	At the Router# prompt, enter: copy tftp running-config<Return> Feedback: Address or name of remote host []? will appear.	This copies the first Cisco configuration file from the RPG newly loaded with Build 6.0. Refer to note before step 1 for the site-unique subnet ID.
40	<u>For NWS, DoD, or FAA Channel 1 only:</u> At the Address or name of remote host []? prompt, enter: 172.25.===.1<Return>	Where === is the site-specific subnet ID (see hosts file).

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
41	<p><u>For FAA Channel 2 only:</u> At the Address or name of remote host []? prompt, enter: 172.25.===.71<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
42	<p>When the following message appears:</p> <p>Source filename []?</p> <p>Enter: rtr-template<Return></p>	<p><u>For FAA systems:</u> Enter the command exactly as listed. Do NOT use rtr1-template or rtr2-template.</p>
43	<p>When the following message appears:</p> <p>Destination filename [running-config]?</p> <p>Enter: <Return></p> <p>The router proceeds with the upload. Error messages describing "Invalid input . . ." noted for non-installed modules are normal. The last responses will be:</p> <p>xxx bytes copied in xx secs (xxx bytes/sec)</p> <p>A rtr# prompt appears in approximately 30 seconds.</p>	Prompt would be rtr1# for an FAA Channel 1, or rtr2# for FAA Channel 2.
44	<p>At the rtr# prompt, enter: copy tftp running-config<Return></p> <p>The following message appears:</p> <p>Address or name of remote host []?</p>	This starts copying the second configuration file depending upon the agency.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>In the next two steps, the address MUST be keystroked in after the prompt. If only the Return key is pressed, as in previous steps, the router load will continue and appear correct, but will NOT operate.</p> <p>The IP address is correct as shown in the brackets, but it must be entered again, nevertheless.</p>		
45	<p><u>For NWS, DoD, or FAA Channel 1 only:</u> At the Address or name of remote host [172.25.===.1]? prompt, enter: 172.25.===.1<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
46	<p><u>For FAA Channel 2 only:</u> At the Address or name of remote host [172.25.===.71]? prompt, enter: 172.25.===.71<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
47	<p>When the following message appears:</p> <p>Source filename [rtr-template]?</p> <p>Depending on user's agency, enter: faa-specific<Return> or dod-specific<Return> or nws-specific<Return></p>	
48	<p>When the following message appears:</p> <p>Destination filename [running-config]?</p> <p>Enter: <Return></p> <p>The router proceeds with the upload. Error messages describing "Invalid input . . ." noted for non-installed modules are normal.</p> <p>A rtr# prompt appears in approximately 30 seconds.</p>	Prompt would be rtr1# for an FAA Channel 1, or rtr2# for FAA Channel 2

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
49	<p><u>All sites except non-operational support sites:</u></p> <p>Skip to Step 60.</p> <p><u>For non-operational support sites only:</u></p> <p>Perform steps 50 through 59, as applicable.</p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The <code>Terminal</code> window used for the majority of this attachment supports a “tip session” with the router. This window is referred to as the “tip session” terminal window in Steps 50 through 54.</p>		
50	At the RPG processor, open a new <code>Terminal</code> window on the desktop. Do not use the “tip session” <code>Terminal</code> window.	To open a <code>Terminal</code> window, right click on an open screen, select Tools, then select Terminal.
51	In the new <code>Terminal</code> window, at the <code>user</code> prompt, enter: cd /tftpboot<Return>	
52	In the new <code>Terminal</code> window, at the <code>/tftpboot</code> prompt, enter: ls<Return>	
53	If the list of files contains a site-specific router template filename (like xxxx-specific), where xxxx corresponds to the system 4-letter ID assigned to this RPG, note the filename and then proceed with steps 54 through 59. Otherwise, proceed to step 60.	
54	In the “tip session” terminal window, at the <code>rtr#</code> prompt, enter: copy tftp running-config<Return>	
55	<p><u>For NWS, DoD, or FAA Channel 1 only:</u></p> <p>At the <code>Source IP Address or hostname []?</code> prompt, enter: 172.25.===.1<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
56	<p>For FAA Channel 2 only:</p> <p>At the Address or name of remote host []? prompt, enter: 172.25.===.71<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
57	<p>When the following message appears:</p> <p>Source filename []?</p> <p>Enter: xxxx-specific<Return></p> <p>Where xxxx-specific corresponds to filename noted in step 53 above.</p>	
58	<p>When the following message appears:</p> <p>Destination filename [running-config]?</p> <p>Enter: <Return></p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If a "... (Timed out)" type message is observed, the file did not upload correctly. Repeat steps 50 through 58.</p>		
59	<p>The RPG Router proceeds with the upload (approximate wait is 30 seconds). Link state change messages may be noted.</p> <p>When complete, a <code>rtr#</code> prompt appears (may need to enter: <Return> to return to the prompt). Prompt would be <code>rtr1#</code> for an FAA redundant channel 1 system, or <code>rtr2#</code> for FAA redundant channel 2.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
60	<p>Steps 61 through 65 are to be performed at systems in one of the following three categories only:</p> <p>a) DoD systems with Frame Relay</p> <p>b) FAA systems with Frame Relay</p> <p>c) Specific NWS systems listed below:</p> <p>Paducah, KY Norfolk, VA Burlington, VT Tallahassee, FL Birmingham, AL Lake Charles, LA El Paso, TX* (*if Frame Relay has been installed) Albuquerque, NM Fort Worth, TX Sacramento, CA Norman, OK Jackson, MS Bismarck, ND Las Vegas, NV Los Angeles San Antonio, TX Mobile, AL Jacksonville, FL Atlanta, GA San Angelo, TX</p> <p>All other sites skip to Step 66.</p>	
61	<p>At the <code>rtr#</code> prompt, enter: copy tftp running-config<Return></p> <p>The following message appears:</p> <p>Address or name of remote host []?</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
62	<p>For DoD, or FAA Channel 1 only: verify IP-address is correct. If it is correct, enter: <Return></p> <p>Otherwise, at the Address or name of remote host []? prompt, enter: 172.25.===.1<Return></p>	<p>Where === is the site-specific subnet ID (see hosts file).</p> <p>Refer to note before step 1 for the site- unique subnet ID.</p>
63	<p>For FAA Channel 2 only: verify IP-address is correct. If it is correct, enter: <Return></p> <p>Otherwise, at the Address or name of remote host []? prompt, enter: 172.25.===.71<Return></p>	<p>Where === is the site-specific subnet ID (see hosts file).</p> <p>Refer to note before step 1 for the site- unique subnet ID.</p>
64	<p>When the following message appears:</p> <p>Source filename [<i>rtr-template</i>]?</p> <p>Enter: fr-specific<Return></p>	<p><i>rtr-template</i> should be faa-specific or dod-specific or nws-specific.</p>
65	<p>When the following message appears:</p> <p>Destination filename [<i>running-config</i>]?</p> <p>Enter: <Return></p> <p>The router proceeds with the upload. Error messages noted for non-installed modules are normal. Also, line state change messages may be noted. When complete, a <i>rtr#</i> prompt appears (may need to enter: <Return> to return to a prompt). Prompt would be <i>rtr1#</i> for an FAA redundant channel 1 system, or <i>rtr2#</i> for FAA redundant channel 2.</p>	

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>Several passwords are assigned for the Router's various ports. To make the management of these passwords simpler for the user, using the same <i>site_password</i> is suggested.</p>		
66	<p>At the <code>rtr#</code> prompt, enter: config t <Return></p> <p>The following message appears:</p> <p>Enter configuration commands, one per line. End with CNTL/Z.</p> <p>Prompt changes to <code>rtr(config)#</code>.</p>	
67	<p>At the <code>rtr(config)#</code> prompt, enter: no enable password<Return></p>	
68	<p>At the <code>rtr(config)#</code> prompt, enter: service password-encryption<Return></p>	
69	<p>At the <code>rtr(config)#</code> prompt, enter: enable password <i>site_password</i><Return></p> <p><u>Make note of the password for future operations.</u></p>	Recording the password is critical to future operations.
70	<p>At the <code>rtr(config)#</code> prompt, enter: line vty 0 4<Return></p> <p>Prompt changes to <code>rtr(config-line)#</code>.</p>	
71	<p>At the <code>rtr(config-line)#</code> prompt, enter: login<Return></p>	
72	<p>At the <code>rtr(config-line)#</code> prompt, enter: password <i>site_password</i><Return></p> <p><u>Make note of the password for future operations.</u></p>	Recording the password is critical to future operations.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
73	At the <code>rtr(config-line)#</code> prompt, enter: line con Ø<Return>	
74	At the <code>rtr(config-line)#</code> prompt, enter: login<Return>	
75	At the <code>rtr(config-line)#</code> prompt, enter: password site_password<Return> <u>Make note of the password for future operations.</u>	Recording the password is critical to future operations.
76	At the <code>rtr(config-line)#</code> prompt, enter: line aux Ø<Return>	
77	At the <code>rtr(config-line)#</code> prompt, enter: login<Return>	
78	At the <code>rtr(config-line)#</code> prompt, enter: password site_password<Return> <u>Make note of the password for future operations.</u>	Recording the password is critical to future operations.
79	At the <code>rtr(config-line)#</code> prompt, enter: exit<Return> Prompt changes to <code>rtr(config)#</code> .	
80	At the <code>rtr(config)#</code> prompt, enter: no service password-encryption<Return>	
81	At the <code>rtr(config)#</code> prompt, enter: logging console<Return>	This turns on the display of the state change comments.
82	At the <code>rtr(config)#</code> prompt, enter: end<Return>	

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
83	<p>When the message below appears:</p> <pre>Configured from console by console</pre> <p>Enter: <Return></p> <p>Prompt changes to <code>rtr#</code>.</p>	
84	<p><u>For sites with Frame Relay (includes all sites listed in Step 60):</u> Skip to step 90.</p> <p><u>For sites without Frame Relay:</u> Proceed to the next step.</p>	
85	<p>At the <code>rtr#</code> prompt, enter: sh run include nat <Return></p> <p>A list of IP addresses appears.</p> <p>Record the IP-address for 165.92.xxx.yyy where xxx represents the third octet and yyy represents the fourth octet of the AWIPS IP-address.</p> <p>You will need the third (xxx) and fourth (yyy) octets of the AWIPS IP-address for the command in Step 87 below.</p>	
86	<p>At the <code>rtr#</code> prompt, enter: config t <Return></p> <p>The following message appears:</p> <pre>Enter configuration commands, one per line. End with CNTL/Z.</pre>	
87	<p>At the <code>rtr(config)#</code> prompt, enter: ip nat inside source static udp 172.25.===.127 123 165.92.xxx.yyy 123 extendable <Return></p> <p>Where === is the site-specific subnet ID (see hosts file).</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
88	At the <code>rtr(config)#</code> prompt, enter: end<Return>	
89	When the message below appears: <code>Configured from console by console</code> Enter: <Return> Prompt changes to <code>rtr#</code> .	
90	At the <code>rtr#</code> prompt, enter: write mem<Return> to save the entries. Messages will appear. Watch for an <code>[OK]</code> prompt, and then a <code>rtr#</code> prompt.	
91	At the <code>rtr#</code> prompt, enter: exit<Return> to exit.	
92	The message: <code>Press RETURN to get started.</code> will appear, but there is no prompt. Enter: ~ . (tilde dot) <code>[EOT]</code> is displayed and the user is returned to a <i>user:</i> prompt.	This exits the tip session. The tilde will not display until the dot (.) is entered. Command is executed when the dot (.) is entered.
93	Unplug the Cisco cable from the I/O Panel J8 Port and Cisco 3600 Series Router CON Port. These connections were made at the beginning of this attachment.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 4 (Continued)

RPG ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
94	If Mod Note 74, Embedded Console Server, has been installed, reconnect the serial cable (70/170W315C) to the CON port at the front of the Cisco 3600 Series Router.	
95	The RPG Router load is complete. Close the <code>Terminal</code> window.	
96	<p><u>For FAA only:</u></p> <p>FIRST TIME THROUGH: The Inactive/Non-controlling channel is now loaded with the Router configuration to support Software Build 6.0. Repeat ATTACHMENT 4 for the other channel currently on the old Router configuration. Switch channels so the new active/controlling channel has the Router already loaded and place this channel in the Operate mode (radar is collecting data on the new active/controlling channel).</p> <p>SECOND TIME THROUGH: Both channels have Router configuration completed for Software Build 6.0. Continue with the next step.</p>	
97	Continue with the next attachment applicable to your site.	

ATTACHMENT 5

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated
31 August 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Tools Required:

Cisco Cable # 72-0876-01 or 72-1259-01
RJ45-DB25(F) adapter #2300027-301 *

* If this adapter is not available, it can be replaced by the RJ45-DB9(F) adapter (Cisco 74-0495-01), DB9 male gender changer, and the 10 foot DB9(F)-DB25(M) serial cable (Black Box EVMBMC-0010). If this combination is used, when referenced below, it should be connected to I/O panel J7 instead of J8. Also, when activated with a tip session, use /dev/cua/1 instead of /dev/cua/3.

Initial Conditions:

The LAN Switch UD70A13 is installed and in normal operating mode located in the RPGPCA cabinet UD70. The LAN Switch has been configured previously. For initial configuration, follow the procedures in NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, paragraph 6.6.10.

This procedure can be performed while the radar is operational.

You MUST know your LAN Switch passwords to complete this attachment.

This procedure is designed to accommodate any site, regardless of whether the site has installed Mod Note 74, Embedded Console Server. In the event the site has completed Mod Note 74, Embedded Console Server, steps are included in this procedure to disconnect the serial cable (70/170W315B) connected to the Console Port of the LAN Switch. The procedure also includes the steps to reconnect this serial cable once the LAN Switch is configured.

For FAA only: Perform this attachment first on the inactive channel LAN Switch while the other channel is operational. Then switch channels and repeat this attachment on the other (now inactive) channel.

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>The LAN Switch must now be upgraded for compatibility with RPG Software Build 6.0. <u>It is critically important to complete ATTACHMENT 2 prior to performing this attachment.</u></p> <p>Prerequisite for using the Radar Product Generation Processor Communications Assembly (RPGPCA) for setup: The Router (UD70A2) is installed and connected to the LAN Switch (UD70A13) in its normal manner. The RPG processor is fully loaded, operational and connected to the LAN Switch (UD70A13) in its normal manner within the RPGPCA cabinet UD70.</p> <p>The next step requires input of the site-specific IP address from the RPG processor. If this number is not known, in a <code>Terminal</code> window, at any prompt enter the following: more /etc/hosts<Return> and put the <i>Third Octet Subnet</i> number (found near the top of the hosts file) in the blank below (this information was collected in ATTACHMENT 4):</p> <p style="text-align: center;">172.25._____.1</p> <p>For FAA Channel 2, the IP address will have the form:</p> <p style="text-align: center;">172.25._____.71</p> <p>For FAA sites, it is recommended to start with the Inactive/Non-controlling channel.</p>		
1	If Mod Note 74, Embedded Console Server, has been installed, disconnect the serial cable (70/170W315B) from the CONSOLE port at the rear of the Cisco Catalyst 2900 series Lan Switch.	
2	<u>All sites:</u> Plug the Cisco configuration cable (72-0876-01 or 72-1259-01) into the CONSOLE port at the back of the Cisco Catalyst 2900 series LAN Switch.	Be sure to plug the cable into the LAN Switch CONSOLE port, not the Polycom CONSOLE port nearby.
3	Attach the free end of the cable to the RJ45-DB25(F) adapter.	
4	Plug the free end of the RJ45-DB25(F) adapter into the I/O Panel J8 Port.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
5	<p>For FAA systems only: Skip to Step 8.</p> <p>For NWS and DoD systems: Perform steps 5 through 7 to access the RPG processor.</p> <p>Depress the <Scroll Lock> button twice on the keyboard, and the Raritan Login screen or the Selection Menu will appear.</p>	
6	<p>If a Raritan Login screen appears, continue with this step, otherwise continue to Step 7. Enter raritan<Return> for the user (no password). The Selection Menu will appear on the monitor.</p>	
7	<p>Under normal conditions, the RPG processor is Channel 1, the BDDS processor is Channel 2, and KBD Failure is Channel 3.</p> <p>Using the ↑ and ↓ keys on the keyboard to highlight the RPG channel, enter: <Return> to invoke the selection.</p>	
8	<p>At the RPG processor, if a CDE Login screen is displayed, login as the normal user.</p>	
9	<p>In a NEW Terminal window, at a <i>user:</i> prompt, enter: tip -9600 /dev/cua/3<Return></p> <p>The feedback <i>connected</i> appears.</p>	<p>To open a Terminal window, right click on an open screen, select Tools, then select Terminal.</p>

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
10	<p>After the <code>connected</code> feedback appears, enter: <Return> again to finish establishing the connection.</p> <p>A <code>Password:</code> prompt should appear. If there is no prompt, verify the routing of the J8 I/O panel reference NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, Figure FO7-4, titled "RPG-PCA Data Cables". Cable W253 goes from J8 to PCI board 2 port 3 (fourth one down on the bottom).</p>	State change messages may appear, and these may cause the <code>connected</code> feedback message to scroll out of sight.
<p style="text-align: center;">NOTE</p> <p>For simplicity, the possible hostname (lan, lan1, or lan2) is referred to as lan for the remainder of this procedure. When an entry requires the LAN Switch hostname, the user needs to enter the appropriate hostname as directed by the procedure.</p>		
<p style="text-align: center;">NOTE</p> <p>The following steps upload a default Initial Operating System (IOS) into the LAN Switch</p>		
11	<p>At the <code>Password:</code> prompt, enter: <code>site_password<Return></code>.</p> <p>If this is a new unit that may have been previously tested by NRC, it will either have no password set or it will use a default password of cisco.</p> <p>A <code>lan></code> prompt appears.</p>	
12	<p>At the <code>lan></code> prompt, enter: enable<Return></p> <p>A <code>Password:</code> prompt appears.</p>	

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
13	<p>At the Password: prompt, enter: <i>site_password</i><Return>.</p> <p>If this is a new unit that may have been previously tested by NRC, it will either have no password set or it will use a default password of cisco.</p> <p>A lan# prompt appears.</p>	
14	<p>At the lan# prompt, enter: write erase <Return></p>	
15	<p>If the following message appears:</p> <p>Erasing the nvram filesystem will remove all files! Continue? [confirm]</p> <p>Enter: <Return></p> <p>[OK] will appear.</p>	
16	<p>At the lan# prompt, enter: reload<Return></p>	
17	<p>At the Proceed with reload? [confirm] prompt, enter: <Return></p> <p>The LAN Switch will now reboot. This will take approximately 1.5 minutes.</p>	<p>If the HCI is displayed, a RDA wideband failure should appear while the LAN Switch reboots.</p>

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
18	<p>When the following message appears:</p> <p>Press RETURN to get started:</p> <p>State Change messages will be noted. Wait approximately 30 seconds until the State Change messages stop. Then enter: <Return></p> <p>A Switch> prompt appears.</p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The following steps configure the IP-address/netmask.</p>		
19	<p>At the Switch> prompt, enter: enable<Return></p> <p>A Switch# prompt appears.</p>	
20	<p>At the Switch# prompt, Enter: config t <Return></p> <p>The prompt changes to a Switch(config)# prompt.</p>	
21	<p>At the Switch(config)# prompt, enter: no logging console<Return></p>	This turns off the display of the state change comments.
22	<p>At the Switch(config)# prompt, enter: int vlan1 <Return></p> <p>The prompt changes to a Switch(config-if)# prompt.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
23	Enter the IP-address string, dependent on system and/or channel, as follows: <u>For NWS, DoD, or FAA Channel 1 only:</u> At the <code>Switch(config-if)#</code> prompt, enter: ip address 172.25.===.6 255.255.255.128<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
24	<u>For FAA Channel 2 only:</u> At the <code>Switch(config-if)#</code> prompt, enter: ip address 172.25.===.76 255.255.255.128<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
25	At the <code>Switch(config-if)#</code> prompt, enter: end<Return> Prompt changes to <code>Switch#</code> (may need to enter: <Return> to return to the prompt).	
26	Enter: write mem<Return> Wait a few seconds for the switch to update and the <code>Switch#</code> prompt to return (may need to enter: <Return> to return to the prompt).	This saves the entries.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The command line entry for Step 27 below includes a colon after the word flash (flash:). The colon must be included in the command string.</p>		
27	At the <code>Switch#</code> prompt, enter: format flash: <Return>	
28	When the following message appears: Format operation may take a while. Continue? [confirm] Enter: <Return>	

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
29	<p>When the following message appears:</p> <pre>Format operation will destroy all data in "flash". Continue? [confirm]</pre> <p>Enter: <Return></p> <p>No immediate feedback will be noted. Data will be destroyed.</p> <p>After approximately 45 seconds, the following message appears:</p> <pre>Format of flash: complete</pre> <p>A Switch# prompt returns.</p>	
<p style="text-align: center;">CAUTION</p> <p>Upon completion of steps 27 through 29, if power is removed without successful completion of steps 30 through 36 the firmware within the LAN Switch will become corrupted (signified by a switch: prompt) and a new LAN Switch must be ordered.</p>		
30	<p><u>For NWS, DoD or FAA Channel 1 only:</u></p> <p>At the Switch# prompt, enter: copy tftp://172.25.===.1/c2900.tar flash: <Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
31	<p><u>For FAA Channel 2 only:</u></p> <p>At the Switch# prompt, enter: copy tftp://172.25.===.71/c2900.tar flash:<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
<p style="text-align: center;">NOTE</p> <p>In the next two steps, the address MUST be keystroked in after the prompt. If only the Return key is pressed, as in previous steps, the LAN Switch load will continue and appear correct, but will NOT operate.</p> <p>The IP address is correct as shown in the brackets, but it must be entered again, nevertheless.</p>		

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
32	<p><u>For NWS, DoD, or FAA Channel 1 only:</u> At the Source IP address or hostname [172.25.===.1]? prompt, enter: 172.25.===.1<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
33	<p><u>For FAA Channel 2 only:</u> At the Source IP address or hostname [172.25.===.71]? prompt, enter: 172.25.===.71<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
34	<p>When the following message appears:</p> <p>Source filename [c2900.tar]?</p> <p>Enter: <Return></p>	
35	<p>When the following message appears:</p> <p>Destination filename [c2900.tar]?</p> <p>Enter: <Return></p> <p>Wait while c2900.tar is loaded (approximately 1 minute). A Switch# prompt will return.</p>	The TAR files are loading properly when !!! appears across the screen.
36	<p>At the Switch# prompt, enter: tar /xtract flash:c2900.tar flash: <Return></p> <p>No immediate feedback is noted. After about 45 seconds, file names will scroll by as the files are extracted. Wait is approximately 1.5 minutes.</p> <p>The Switch# prompt returns.</p>	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
37	Reload the LAN Switch by performing the following steps: At the Switch# prompt, enter: reload <Return>	
38	At the Proceed with reload? [confirm] prompt, enter: <Return>	
39	The LAN Switch reloads the default software (takes approximately 1 minute). When complete, the feedback states: C2900XL INIT: Complete Five or ten more State Change messages may be noted following this feedback line, however, 30-60 seconds later. Ignore these State Change messages and continue with the next step.	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">Throughout this procedure, the LAN Switch state is changed and a feedback message is presented while the user is trying to complete entries. To return to an entry prompt, press <Return></p>		
40	Enter: <Return>	
41	When the following message appears: Continue with configuration dialog? [yes/no]: Enter: n<Return>	

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
42	<p>When the following message appears:</p> <p>Press RETURN to get started.</p> <p>Enter: <Return></p> <p>A Switch> prompt appears.</p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The following steps configure the IP-address/netmask.</p>		
43	<p>At the Switch> prompt, enter: enable<Return></p> <p>A Switch# prompt appears.</p>	
44	<p>At the Switch# prompt, Enter: config t <Return></p> <p>The prompt changes to a Switch(config)# prompt.</p>	
45	<p>At the Switch(config)# prompt, enter: int vlan1<Return></p> <p>The prompt changes to a Switch(config-if)# prompt.</p>	
46	<p><u>For NWS, DoD, or FAA Channel 1 only:</u> enter: ip address 172.25.===.6 255.255.255.128<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
47	<p><u>For FAA Channel 2 only:</u> enter: ip address 172.25.===.76 255.255.255.128<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
48	At the <code>Switch(config-if) #</code> prompt, enter: end<Return> Prompt changes to <code>Switch#</code> (may need to enter: <Return> to return to the prompt).	
49	When the following message appears: <code>Configured from console by console</code> Enter: <Return>	
50	At the <code>Switch#</code> prompt, enter: write mem<Return> Wait a few seconds for the switch to update and the <code>Switch#</code> prompt to return (may need to enter: <Return> to return to the prompt).	This saves the entries.
NOTE The following steps upload the configuration files.		
51	At the <code>Switch#</code> prompt. Enter: copy tftp running-config<Return>	
52	<u>For NWS, DoD, or FAA Channel 1 only:</u> At the <code>Source IP Address or hostname []?</code> prompt, enter: 172.25.===.1<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
53	<u>For FAA Channel 2 only:</u> At the <code>Source IP Address or hostname []?</code> prompt, enter: 172.25.===.71<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
54	When the following message appears: Source filename []? Enter: lan-template<Return>	-
55	When the following message appears: Destination filename [running-config]? Enter: <Return>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If a "... (Timed out)" type message is observed, the file did not upload correctly. Repeat steps 51 through 55.</p>		
56	The LAN Switch proceeds with the upload (approximate wait is 30 seconds). Link State Change messages may be noted. After approximately 30 seconds, enter: <Return> A lan# prompt appears.	
57	At the lan# prompt, enter: copy tftp running-config<Return>	
58	<u>For NWS, DoD, or FAA Channel 1 only:</u> At the Source IP Address or hostname []? prompt, enter: 172.25.===.1<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
59	<u>For FAA Channel 2 only:</u> At the Source IP Address or hostname []? prompt, enter: 172.25.===.71<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
60	<p>Enter one of the following agency-specific commands.</p> <p><u>For FAA only:</u> At the Source filename []? prompt, enter: faa-lan-specific<Return></p> <p><u>For DoD only:</u> At the Source filename []? prompt, enter: dod-lan-specific<Return></p> <p><u>For NWS only:</u> At the Source filename []? prompt, enter: nws-lan-specific<Return></p>	
61	<p>When the following message appears:</p> <p>Destination filename [running-config]?</p> <p>Enter: <Return></p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If a "... (Timed out)" type message is observed, the file did not upload correctly. Repeat steps 57 through 61.</p>		
62	<p>The LAN Switch proceeds with the upload (approximate wait is 30 seconds). Link State Change messages may be noted.</p> <p>When complete, a lan# prompt appears (may need to enter: <Return> to return to the prompt). Prompt would be lan1# for an FAA Channel 1 system, or lan2# for FAA Channel 2 system.</p>	

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
63	<p><u>All sites except non-operational support sites:</u></p> <p>Skip to Step 74.</p> <p><u>For non-operational support sites only:</u></p> <p>Perform steps 64 through 73, as applicable.</p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The <code>Terminal</code> window used for the majority of this attachment supports a “tip session” with the LAN Switch. This window is referred to as the “tip session” terminal window in Steps 64 through 68.</p>		
64	At the RPG processor, open a new <code>Terminal</code> window on the desktop. Do not use the “tip session” <code>Terminal</code> window.	To open a <code>Terminal</code> window, right click on an open screen, select Tools, then select Terminal.
65	In the new <code>Terminal</code> window, at the <code>user</code> prompt, enter: cd /tftpboot<Return>	
66	In the new <code>Terminal</code> window, at the <code>/tftpboot</code> prompt, enter: ls<Return>	
67	If the list of files contains a site-specific LAN Switch template filename (i.e., xxxx-LAN-specific), where xxxx corresponds to the system 4-letter ID assigned to this RPG, note the filename and then proceed with steps 68 through 73. Otherwise, proceed to step 74.	
68	In the “tip session” terminal window, at the <code>lan#</code> prompt, enter: copy tftp running-config<Return>	
69	<p><u>For NWS, DoD, or FAA Channel 1 only:</u></p> <p>At the <code>Source IP Address or hostname</code> [] ? prompt, enter: 172.25.===.1<Return></p>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
70	For FAA Channel 2 only: At the Source IP Address or hostname []? prompt, enter: 172.25.===.71<Return>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 1 for the site-unique subnet ID.
71	When the following message appears: Source filename []? Enter: xxxx-lan-specific<Return> Where xxxx-lan-specific corresponds to filename noted in step 67 above.	
72	When the following message appears: Destination filename [running-config]? Enter: <Return>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">If a "... (Timed out)" type message is observed, the file did not upload correctly. Repeat steps 64 through 72.</p>		
73	The LAN Switch proceeds with the upload (approximate wait is 30 seconds). Link State Change messages may be noted. When complete, a lan# prompt appears (may need to enter: <Return> to return to the prompt). Prompt would be lan1# for an FAA Channel 1 system, or lan2# for FAA Channel 2 system.	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The following steps setup the site-specific passwords.</p>		

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
74	At the <code>lan#</code> prompt, enter: config t <Return> A <code>lan(config)#</code> prompt appears.	
75	At the <code>lan(config)#</code> prompt, enter: no enable password<Return>	
76	At the <code>lan(config)#</code> prompt, enter: no enable secret<Return>	
77	At the <code>lan(config)#</code> prompt, enter: enable password site_password<Return> <u>Make note of the password for future operations.</u>	Recording the password is critical to future operations.
78	At the <code>lan(config)#</code> prompt, enter: no username hostname<Return> Where <i>hostname</i> is lan for a NWS or DoD system, lan1 for an FAA Channel 1 system, or lan2 for FAA Channel 2 system.	
79	At the <code>lan(config)#</code> prompt, enter: username hostname password Ø site_password<Return> Where <i>hostname</i> is lan for a NWS or DoD system, lan1 for an FAA redundant channel 1 system, or lan2 for FAA redundant channel 2.	
80	At the <code>lan(config)#</code> prompt, enter: line vty Ø 4<Return>	

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
81	At the <code>lan(config-line)#</code> prompt, enter: password <code>site_password</code> <Return> <u>Make note of the password for future operations.</u>	Recording the password is critical to future operations.
82	At the <code>lan(config-line)#</code> prompt, enter: line con <code>Ø</code> <Return>	
83	At the <code>lan(config-line)#</code> prompt, enter: login <Return>	
84	At the <code>lan(config-line)#</code> prompt, enter: password <code>site_password</code> <Return> <u>Make note of the password for future operations.</u>	Recording the password is critical to future operations.
85	At the <code>lan(config-line)#</code> prompt, enter: exit <Return>	
86	At the <code>lan(config)#</code> prompt, enter: logging console <Return>	
87	At the <code>lan(config)#</code> prompt, enter: end <Return> Feedback: <code>Configured from console by console</code>	
88	Enter: <Return>	
89	At the <code>lan#</code> prompt, enter: write mem <Return>	This saves the entries.
90	At the <code>lan#</code> prompt, enter: exit <Return>	Exits.

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
91	<p>The message:</p> <p>Press RETURN to get started.</p> <p>will appear, but there is no prompt.</p> <p>Enter:</p> <p>~. (tilde-dot)</p> <p>EOT is displayed and the user is returned to a <i>user:</i> prompt.</p>	<p>This exits the tip session.</p> <p>The tilde will not display until the dot (.) is entered.</p> <p>Command is executed when the dot (.) is entered.</p>
92	Unplug the Cisco cable from the I/O Panel J8 Port and LAN Switch CONSOLE Port. These connections were made at the beginning of this attachment.	
93	If Mod Note 74, Embedded Console Server has been installed, reconnect the serial cable (70/170W315B) to the CONSOLE port at the rear of the LAN Switch.	
94	The LAN Switch load is now complete. Close the Terminal window.	
95	<p><u>For FAA only:</u></p> <p>FIRST TIME THROUGH: The Inactive/Non-controlling channel is now loaded with the LAN Switch configuration to support Software Build 6.0. Repeat ATTACHMENT 5 for the other channel currently on the old LAN Switch configuration. Switch channels so the new active/controlling channel has the LAN Switch already loaded and place this channel in the Operate mode (radar is collecting data on the new active/controlling channel).</p> <p>SECOND TIME THROUGH: Both channels have LAN Switch configuration completed for Software Build 6.0. Continue with the next step.</p>	

ATTACHMENT 5 (Continued)

RPG LAN SWITCH SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
96	As a reminder, from ATTACHMENT 2 , send the diskette(s) labeled: <u>RPG Build 6.0 - Merged Adaptation Data - ROC</u> to the following address: Radar Operations Center Configuration Management ATTN: Chris Hunt 3200 Marshall Ave Norman, OK 73072-8028	This data provides the ROC with information to support future builds.
97	Continue with the next attachment applicable to your site.	

ATTACHMENT 6

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated 30 September 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Tools Required:

Cisco Cable # 72-3383-01, or

Cisco Cable # 72-0876-01 or 72-1259-01, and
RJ45-DB9(F) adapter (74-0495-01)

(These tools should be in the kit provided with the RPG installation. This is a light blue flat cable approximately 8 feet long with a beige adapter at one end.)

- * Laptop computer with available DB9 serial port, Windows 95 (or higher) Operating System, and HyperTerminal software
- * Required only if using the laptop computer configuration option.

Initial Conditions:

The Frame Relay Hub Router UD75 is installed and connected normally to the Distant MSCF processor Configuration UD71 (Distant MSCF #1 at locations with multiple MSCFs). The Frame Relay Hub Router has been configured previously. For initial configuration, follow the procedures in NWS EHB 6-525, DoD AFTO 31P1-4-108-452-1, FAA TI 6345.1 V49, paragraph 6.6.22.

Normally, the Frame Relay Hub Router is located in close proximity to the Distant MSCF processor (i.e., within reach of the Cisco Cable # 72-3383-01). If it is not within reach of the Cisco Cable # 72-3383-01, this attachment must be performed via laptop computer.

To configure the Frame Relay Hub Router via laptop computer, first perform the Frame Relay Hub Router and Laptop Computer Setup procedures in EHB 6-525, Revision 3, dated 30 September 2004, Paragraph 6.6.22.3.1, steps 1 through 7. After completing the aforementioned steps in EHB 6-525, skip to Step 25 in this attachment.

Be knowledgeable of user IDs, user passwords, and root passwords for your site. This should include any needed router passwords.

All previous attachments applicable to your site must be completed.

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>For those sites using Frame Relay, the Hub Router must now be upgraded for compatibility with MSCF Software Build 6.0. <u>It is critically important to complete ATTACHMENT 1 prior to performing this attachment.</u></p> <p><u>Sites with multiple MSCFs must perform ATTACHMENT 1 on MSCF #1 prior to performing this attachment. Perform this attachment only once (i.e., in association with the Build 6 Software Load on Distant MSCF #1).</u> Remaining Distant MSCFs may be either Build 5.0 or Build 6.0. Distant MSCF#1 is the MSCF whose 4-letter radar locator ID comes first in alphabetical order among the multiple sites. See the list below to determine which Distant MSCF is considered #1.</p> <ul style="list-style-type: none"> • For the Anchorage, AK WFO, Bethel, AK (PABC) is Distant MSCF #1. • For the Fairbanks, AK WFO, Nome, AK (PAEC) is Distant MSCF #1. • For the Honolulu, HI WFO, South Kauai, HI (PHKI) is Distant MSCF #1. • For the Norman, OK WFO, Altus AFB, OK (KFDR) is Distant MSCF #1. <p>A later step requires input of the site-specific IP address from the MSCF processor. If this number is not known, in a terminal window, at any prompt enter the following: more /etc/hosts<Return> and put the <i>Third Octet Subnet</i> number (found near the top of the hosts file) in the blank below:</p> <p style="text-align: center;">172.25._____.1</p>		
1	<p><u>For sites with the Frame Relay Hub Router located in close proximity to the Distant MSCF processor:</u></p> <p>Plug the RJ45 end of the Cisco cable (72-3383-01) into the CONSOLE port at the back of the Cisco 2621XM Frame Relay Hub Router.</p> <p>Plug the other end of the Cisco cable into the 9-pin serial port B at the back of the Distant MSCF Sun Processor.</p>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
2	<p>If the Frame Relay Hub Router is located too far from the Distant MSCF processor for the CISCO Cable # 72-3383-01 to reach (greater than eight feet), then this attachment must be performed via laptop computer.</p> <p>If using the laptop computer method, first perform the procedures in EHB 6-525, Revision 3, dated 30 September 2004, Paragraph 6.6.22.3.1, steps 1 through 7. After completing the aforementioned steps in EHB 6-525, skip to Step 25 in this attachment.</p>	
3	<p>In a <code>Terminal</code> window of the Distant MSCF processor, enter: su<Return></p> <p>then enter: <i>root-password<Return></i> to become the Superuser.</p>	
4	<p>At the <code>#</code> prompt, enter: admintool&<Return> to open up the system Admintool.</p>	
5	<p>In the <code>Admintool:Users</code> window, click Browse, then click Serial Ports to open up the serial port list (<code>Admintool:Serial Ports</code>).</p>	
6	<p>In the <code>Admintool:Serial Ports</code> window, double-click on the Port "b" line to open it.</p>	
7	<p>In the <code>Admintool:Modify Serial Port</code> window, click the Service Enable check block to deselect the Service (no check mark).</p>	
8	<p>In the <code>Admintool:Modify Serial Port</code> window, click Apply.</p> <p>Leave this window open for use at the end of the procedure.</p>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
9	Click in the <code>Terminal</code> window to make it the active window. At the <code>#</code> prompt, enter: tip -9600 /dev/cua/b<Return>	
10	If the feedback <code>all ports busy</code> appears, continue to Step 11. If the feedback <code>connected</code> appears, skip to Step 23.	
11	When the feedback <code>all ports busy</code> is received, it indicates the last session with the Distant MSCF Sun processor was not completed correctly. This error message must be cleared to continue. Disconnect serial cable from serial B of the Distant MSCF Sun processor.	
12	In the <code>Admintool:Serial Ports</code> window, click on serial port b to highlight serial port "b".	
13	Click Edit , then click Delete to delete serial port "b" configuration. Confirm deletion.	
14	Serial Port "b" now is configured as <code>< no service ></code>	
15	In the <code>Terminal</code> window, at the <code>#</code> prompt, enter: tip -9600 /dev/cua/b<Return> Feedback will read <code>connected</code> .	
16	In the <code>Admintool:Users</code> window, double-click on serial port "b". A <code>Modify Serial Port Menu</code> window opens.	
17	In the <code>Modify Serial Port Menu</code> window, click on the Expert option from the <code>Detail</code> options.	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
18	In the <code>Modify Serial Port Menu</code> window, click the current <code>Template</code> option.	
19	A menu of possible selections will appear. Click Terminal - Hardwired to select it as the template option.	
20	Click the <code>Service Enable</code> check block to deselect the <code>Service</code> (no check mark), then click Apply .	
21	Serial Port "b" is now displayed as a configured port (i.e. no longer reads <code>< no service ></code>). Leave <code>Admintool</code> open for use at the end of this procedure.	
22	Reconnect the serial cable to port B of the Distant MSCF Sun processor.	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">For some devices, reconnecting the serial cable may terminate the tip session. If so, reenter: tip -9600 /dev/cua/b<Return> in the terminal to reestablish the connection.</p>		
23	A <code>connected</code> feedback line appears. To finish establishing the connection, enter: <Return>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The following steps upload a default Initial Operating System (IOS) into the Frame Relay Hub Router.</p>		
24	When prompted, enter: <code>site_password<Return></code> . The password must be entered promptly, or it will timeout.	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
25	At the <code>FRhubxxx></code> prompt, enter: enable<Return> A <code>Password:</code> prompt appears.	xxxx represents the site mnemonic, in lower case letters.
26	At the <code>Password:</code> prompt, enter: <code>site_password<Return></code> . If this is a new unit that may have been previously tested by NRC, it will either have no password set or it will use a default password of cisco .	
27	At the <code>FRhubxxx#</code> prompt, enter: erase startup-config<Return>	
28	When the following message appears: <code>Erasing the nvram filesystem will remove all configuration files ! Continue? [confirm]</code> Enter: <Return>	
29	Wait approximately 15 seconds for the following message to appear: <code>[OK]. Erase of nvram: complete.</code>	
30	If the following message appears: <code>%SYS-7-NV_BLOCK_INIT: Initialized the geometry of nvram</code> Enter: <Return> The <code>FRhubxxx#</code> prompt reappears.	
31	At the <code>FRhubxxx#</code> prompt, enter: reload<Return>	Reboots the hub router.

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
32	<p>If the following message appears:</p> <p>System Configuration has been modified. Save? [yes-no]:</p> <p>Enter: n<Return></p>	
33	<p>When the following message appears:</p> <p>Proceed with reload? [confirm]</p> <p>Enter: <Return></p> <p>Once the Frame Relay Hub Router powers up, it reloads the default software (this takes approximately 1.5 minutes).</p>	
34	<p>The last line of feedback states:</p> <p>Would you like to enter initial configuration dialog? [yes/no]:</p> <p>When the above feedback appears, enter: n<Return></p>	
35	<p>If the following message appears:</p> <p>Would you like to terminate autoinstall? [yes]:</p> <p>Enter: y<Return></p>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
36	<p>The following message briefly appears:</p> <pre>Press RETURN to get started!</pre> <p>Numerous State Change messages will be noted at this time. Wait approximately 30 seconds until the messages stop displaying before continuing.</p> <p>Enter: <Return></p> <p>The <code>Router></code> prompt appears. If it doesn't appear, repeat this step.</p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">Steps 37 through 45 configure the Ethernet port.</p>		
37	<p>At the <code>Router></code> prompt, enter: enable<Return></p> <p>The prompt changes to <code>Router#</code></p>	
38	<p>At the <code>Router#</code> prompt, enter: config t <Return></p> <p>The following message appears:</p> <pre>Enter configuration commands, one per line. End with CNTL/Z.</pre> <p>The prompt changes to <code>Router (config)#</code></p>	
39	<p>At the <code>Router (config)#</code> prompt, enter: no logging console<Return></p>	This turns off the display of the state change comments.

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
40	<p>This step is specific to the type of distant radar the frame relay hub router is supporting. If the hub router is supporting a DOD or FAA system, enter the following as appropriate.</p> <p><u>For all sites except Anchorage and Honolulu:</u> At the Router(config)# prompt, enter: int Ethernet 1/1<Return></p> <p><u>For Anchorage and Honolulu WFOs only:</u> at the Router(config)# prompt, enter: int Ethernet 1/Ø<Return></p> <p>Prompt changes to Router (config-if)#</p>	
41	<p>Use the hosts file to complete the Frame Relay Hub Router IP Address below.</p> <p>At the Router(config-if)# prompt, enter: ip address 172.25.===.1ØØ 255.255.255.128<Return></p>	Where === is the site-specific subnet ID (see hosts file).
42	<p>At the Router(config-if)# prompt, enter: bridge-group 1 <Return></p>	
43	<p>At the Router(config-if)# prompt, enter: no shutdown<Return></p>	
44	<p>At the Router(config-if)# prompt, enter: end<Return></p>	
45	<p>At the Router# prompt, enter: write mem<Return></p> <p>Feedback: Building configuration... [OK]</p>	This saves the entries.

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTES</p> <p>In Step 46 below, sites supporting multiple Distant MSCFs (Anchorage, AK; Fairbanks, AK; Honolulu, HI; and Norman, OK), use the IP-address of Distant MSCF #1. Distant MSCF#1 is the MSCF whose 4-letter radar locator ID comes first in alphabetical order among the multiple sites. See the list below to determine which Distant MSCF is considered #1.</p> <ul style="list-style-type: none"> • For the Anchorage, AK WFO, Bethel, AK (PABC) is Distant MSCF #1. • For the Fairbanks, AK WFO, Nome, AK (PAEC) is Distant MSCF #1. • For the Honolulu, HI WFO, South Kauai, HI (PHKI) is Distant MSCF #1. • For the Norman, OK WFO, Altus AFB, OK (KFDR) is Distant MSCF #1. <p>For KLOX only, skip to Step 47 if configuring the frame relay hub router link for Vandenberg AFB (KVTX). The RPG IP address is used for VBG only because it is not associated with a distant MSCF.</p>		
46	<p><u>All systems except Los Angeles, CA WFO:</u></p> <p>At the Router# prompt, Enter: copy tftp://172.25.===.20/c2600XM.bin flash:<Return></p> <p>The IP Address is the Distant MSCF processor IP Address and === is the site-specific subnet number. Enter the correct subnet using the Distant MSCF processor hosts file.</p>	Sites with multiple MSCFs use the subnet number of Distant MSCF #1.
47	<p><u>Los Angeles, CA WFO only:</u></p> <p>At the Router# prompt, enter: copy tftp://172.25.===.1/c2600XM.bin flash:<Return></p> <p>Where (===) is the site-specific third octet of the IP Address of the Vandenberg AFB, CA (KVTX) RPG.</p>	
48	<p>When the following message appears:</p> <p>Destination filename [c2600XM.bin]?</p> <p>Enter: <Return></p>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">NOTE</p> <p>If the observed feedback indicates that there is insufficient storage space available for the new file, then enter erase flash:<Return> and return to step 46 (Step 47 for KLOX) to copy in the new file .</p>		
49	<p>When the following message appears:</p> <p>There is a file already existing with this name. Do you want to over write? [confirm]</p> <p>Enter: <Return></p>	
50	<p>When one of the following two messages appears:</p> <p>a) Accessing tftp://172.25.===.20/c2600XM.bin... Erase flash: before copying? [confirm]</p> <p>b) <u>Los Angeles, CA WFO only:</u> Accessing tftp://172.25.===.1/c2600XM.bin... Erase flash: before copying? [confirm]</p> <p>Enter: <Return></p>	<p>Where === is the site-specific subnet number (for the Los Angeles, CA WFO, it is the site-specific third octet of the KVTX RPG IP address).</p>
51	<p>When the following message appears:</p> <p>Erasing the flash filesystem will remove all files! Continue? [confirm]</p> <p>Enter: <Return></p> <p>Wait for approximately 30 seconds while the older file is erased and the new file loads.</p>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
<p style="text-align: center;">CAUTION</p> <p>The operating system file has just been erased and it is critical that the new operating system correctly loads into flash. DO NOT cycle power to the router unless the new file is correctly loaded as indicated by the checksum verification message in the next step. If the checksum verification message is not received, steps 46 through 52 must be repeated. Carefully verify Step 46 entries (Step 47 for KLOX) and ensure the Distant MSCF processor is operating since the file is uploaded from the Distant MSCF processor (from KVBX RPG for Los Angeles, CA WFO).</p>		
52	Ensure the Verifying checksum...OK message appears followed by the Router# prompt.	
53	At the Router# prompt, enter: reload<Return>	Reboots the router.
54	When the following message appears: Proceed with reload? [confirm] Enter: <Return> Once the Frame Relay Hub Router powers up, it reloads the default software (this takes approximately 1.5 minutes).	
55	The following message briefly appears: Press RETURN to get started! Enter: <Return> The Router> prompt appears.	
56	At the Router> prompt, enter: enable<Return> The prompt changes to Router#	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
57	<p>The following steps upload the configuration file.</p> <p>At the Router# prompt, enter: copy tftp running-config<Return></p> <p>Feedback: Address or name of remote host []?</p>	
58	<p><u>All systems except Los Angeles, CA WFO:</u></p> <p>When the following message appears:</p> <p>Address or name of remote host []?</p> <p>Enter: 172.25.===.20<Return></p> <p>Where === is the site specific subnet number (see hosts file). Sites with multiple MSCFs use the subnet number for MSCF #1.</p>	
59	<p><u>Los Angeles, CA WFO only:</u></p> <p>When the following message appears:</p> <p>Address or name of remote host []?</p> <p>Enter: 172.25.===.1<Return></p> <p>This is the IP Address of the Vandenberg AFB, CA RPG (KVTX), where === is the site-specific third octet of the address.</p> <p>Feedback: Source filename []?</p>	
60	<p>Enter: hub-template<Return></p> <p>Feedback: Destination filename [running-config]?</p>	
61	<p>Enter: <Return></p>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
62	<p>The Frame Relay Hub Router proceeds with the upload (a 30-second to 2-minute wait). Error messages noted for non-installed modules are normal. Also, link State Change messages may appear.</p> <p>When complete, a <code>FRhubxxx#</code> prompt should appear.</p> <p>If the <code>FRhubxxx#</code> prompt does not appear, enter: <Return> to get the prompt.</p>	
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">The following steps setup the site-specific passwords. Several passwords are assigned for the Frame Relay Hub Router's various ports.</p>		
63	<p>At the <code>FRhubxxx#</code> prompt, enter: config t <Return></p> <p>The prompt changes to <code>FRhubxxx(config)#</code>.</p>	
64	<p>At the <code>FRhubxxx(config)#</code> prompt, enter: no enable password<Return></p>	
65	<p>At the <code>FRhubxxx(config)#</code> prompt, enter: no enable secret<Return></p>	
66	<p>At the <code>FRhubxxx(config)#</code> prompt, enter: service password-encryption<Return></p>	
67	<p>At the <code>FRhubxxx(config)#</code> prompt, enter: enable password <i>site_password</i><Return></p> <p><u>Make note of the password for future operations.</u></p>	Recording the password is critical for future operations.

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
68	At the FRhubxxx(config) # prompt, enter: line vty 0 4 <Return>	
69	At the FRhubxxx(config-line) # prompt, enter: login<Return>	
70	At the FRhubxxx(config-line) # prompt, enter: password site_password<Return> <u>Make note of the password for future operations.</u>	Recording the password is critical for future operations.
71	At the FRhubxxx(config-line) # prompt, enter: line con 0 <Return>	
72	At the FRhubxxx(config-line) # prompt, enter: login<Return>	
73	At the FRhubxxx(config-line) # prompt, enter: password site_password<Return> <u>Make note of the password for future operations.</u>	Recording the password is critical for future operations.
74	At the FRhubxxx(config-line) # prompt, enter: line aux 0 <Return>	
75	At the FRhubxxx(config-line) # prompt, enter: login<Return>	
76	At the FRhubxxx(config-line) # prompt, enter: password site_password<Return> <u>Make note of the password for future operations.</u>	Recording the password is critical for future operations.
77	At the FRhubxxx(config-line) # prompt, enter: exit<Return>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
78	At the <code>FRhubxxx(config)#</code> prompt, enter: no service password-encryption<Return>	
79	At the <code>FRhubxxx(config)#</code> prompt, enter: logging console<Return>	
80	At the <code>FRhubxxx(config)#</code> prompt, enter: end<Return>	
81	When the message below appears: <code>Configured from console by console</code> Enter: <Return>	
82	At the <code>FRhubxxx#</code> prompt, enter: sh run include nat <Return> A list of IP addresses appears. Record the IP-address for 165.92.xxx.yyy where xxx represents the third octet and yyy represents the fourth octet of the AWIPS IP-address. If more than one 165.92 address appears, use the first one. You will need the third (xxx) and fourth (yyy) octets of the AWIPS IP-address for the command in Step 84 below.	
83	At the <code>FRhubxxx#</code> prompt, enter: config t <Return> The following message appears: <code>Enter configuration commands, one per line. End with CNTL/Z.</code>	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
84	At the <code>FRhubxxx(config)#</code> prompt, enter: ip nat inside source static udp 172.25.===.127 123 165.92.xxx.yyy 123 extendable <Return> Where === is the site-specific subnet ID (see hosts file).	
85	At the <code>FRhubxxx(config)#</code> prompt, enter: end<Return>	
86	When the message below appears: <code>Configured from console by console</code> Enter: <Return> Prompt changes to <code>FRhubxxx#</code> .	
87	At the <code>FRhubxxx#</code> prompt, enter: write mem<Return> Wait until the <code>FRhubxxx#</code> prompt appears before proceeding (may take 20 seconds).	This saves the entries.
88	If the following message appears: <code>Overwrite the previous NVRAM configuration ? [confirm]</code> Enter: <Return>	
89	At the <code>FRhubxxx#</code> prompt, enter: exit<Return>	
90	If using the Distant MSCF Sun Processor to configure the Frame Relay Hub Router, skip to Step 93 . If using a laptop to configure the Frame Relay Hub Router, continue to Step 91 .	

ATTACHMENT 6 (Continued)

FRAME RELAY HUB ROUTER SOFTWARE BUILD 6.0 LOAD INSTRUCTIONS

Step	Action/Response	Comments
91	Click on the X in the upper-right corner on the open HyperTerminal window(s) to shut down the HyperTerminal session.	
92	Click Yes to disconnect and Yes to save the session, if presented with these options. Skip to Step 97.	
93	In the <code>Admintool:Modify Serial Port</code> window, click the Service Enable check block to select the Service (has check mark). Click OK .	
94	In the <code>Admintool:Serial Ports</code> window, click File , then click Exit to close the window.	
95	The message: <code>Press RETURN to get started.</code> will appear in the <code>Terminal</code> window, but there is no prompt. Enter: <code>~.</code> (tilde-dot) <code>[EOT]</code> is displayed and the user is returned to a <code>#</code> prompt.	This exits the tip session.
96	At the <code>#</code> prompt, enter: exit<Return> This ends the Superuser session and returns the normal user prompt.	
97	Unplug the cable that was connected at the beginning of this procedure from the Distant MSCF Sun processor (or laptop computer) and Frame Relay Hub Router.	
98	This completes the setup procedure.	

ATTACHMENT 7

MSCF RESTORATION

Technical Manual Required:

Maintenance Instructions, Radar Product Generator (RPG), Revision 3, dated
31 August 2004
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49

Materials Required:

None

Initial Conditions:

All previous attachments applicable to your site must be completed.

The MSCF and RPG must have Build 6.0 successfully loaded. For FAA sites, both RPGs must be successfully loaded with Build 6.0.

Step	Action/Response	Comments
NOTES		
The following steps are to be completed on the MSCF with the assistance of site operators.		
The three Exclusion Zones hard-coded in Build 5.0 are not hard-coded in Build 6.0, and they are not merged forward when Build 6.0 is loaded. Exclusion Zones which have been manually entered will merge forward, however, and will appear in the Hydromet Preprocessing Algorithm fields. Additional guidance on Exclusion Zones will be forwarded from the ROC under separate cover.		
1	<u>For NWS and DoD systems:</u> If the HCI is not open, at the MSCF window, click on the RPG HCI button. The RPG Control/Status window (HCI) opens. <u>For FAA systems only:</u> Open the HCI for the Active/Controlling channel by clicking on the RPG HCI button. The RPG Control/Status window (HCI) opens.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 7 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
2	On the HCI, in the Applications area on the right side of the screen, click on the Clutter Regions icon. The Clutter Regions window opens.	
3	In the Clutter Regions window, click on the File button and the Clutter Region Files window appears.	
4	In the Clutter Region Files window, double-click the clutter region file to be used for daily operations.	This selected file now appears on the Clutter Regions window.
5	Click Close to close the Clutter Region Files window.	
6	On the Clutter Regions window, click Download and Yes to download the selected clutter region file to the RDA. Response in Feedback line of the HCI will read: Downloading New Clutter Censor Zones.	
7	Click Close to close the Clutter Regions window.	
8	Under the Applications column of the HCI, click on the Environmental Data icon. This opens the Environmental Data Editor window.	Updates can be done graphically using the mouse on the Environmental Data Editor window.
9	In the Environmental Data Editor window, click on the Data Entry button. This opens the Environmental Data Entry window.	
10	In the Environmental Data Entry window, verify and update with assistance from the site operator: - Environmental Winds - The 0 degrees and -20 degrees Hail Temperature Heights - Default Storm Motion	
11	If any changes are made, click Save and Yes . Answer the warning_popup that then appears to enable VAD update if desired.	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 7 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
12	Click on the Close button in the Environmental Data Entry window.	
13	In the Environmental Data Editor window, enable VAD update if desired. Click on the Close button in the Environmental Data Editor window	
14	In the HCI, the RPG Control/Status window shows the software build number (e.g. B6.0) in the lower right corner of the screen. The software build is also distributed to all users in the General Status Message (GSM).	This verifies Software Build 6.0 is loaded.
15	In the HCI, click on the Comms button under the USERS Group. The Product Distribution Comms Status window opens. Verify all site Users lines are connected. Check both windows, lines 1-24 and 25-42.	WAN lines 26-32 and 41-42 are now listed.
16	Close the Product Distribution Comms Status window by clicking on the Close button.	
17	Check the following variables to ensure they are correctly set for your site's operation: In the HCI, lower right corner: -Auto PRF -Calibration -Audio Alarms -RDA Messages In the RDA Control/Status window: -RDA Control -Interference Suppression In the VCP Control window: -VCP In the RPG Control window: -Default Weather Mode	

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 7 (Continued)

MSCF RESTORATION

Step	Action/Response	Comments
18	<u>For FAA only:</u> Switch channels to make the other channel the Active/Controlling and repeat this attachment on the new Active/Controlling channel.	
19	Please remember to send the diskette(s) labeled: <u>RPG Build 6.0 - Merged Adaptation Data - ROC</u> to the following address: Radar Operations Center Configuration Management ATTN: Chris Hunt 3200 Marshall Ave Norman, OK 73072-8028	This data provides the ROC with information to support future builds.
20	<u>For NWS only:</u> Using ATTACHMENT 10 as a guide, report the successful loading of Software Build 6.0 on EMRS.	List the Equipment Code as RPG, MSCF, or MSCF in Block 7. Three reports are necessary; one for each piece of equipment.
21	<u>For DoD and FAA:</u> Go to ATTACHMENT 9 to report the successful loading of Build 6.0.	

ATTACHMENT 8

EFFECTIVITY

NWS

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
Eastern Region				
ALBANY	ALBANY, NY	RPG MSCF BDDS	ALY	WN9518
BINGHAMTON	JOHNSON CITY, NY	RPG MSCF BDDS	BGM	WN9515
BOSTON	TAUNTON, MA	RPG MSCF BDDS	BOX	WN9509
BROOKHAVEN	UPTON, NY	RPG MSCF BDDS	OKX	WN9912
BUFFALO	BUFFALO, NY	RPG MSCF BDDS	BUF	WN9528
BURLINGTON	SOUTH BURLINGTON, VT	RPG MSCF	BTV	WN9617
FT DRUM	SOUTH BURLINGTON, VT	MSCF	BTV	WN9617
BURLINGTON	SOUTH BURLINGTON, VT	BDDS	BTV	WN9617

ATTACHMENT 8 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CARIBOU	CARIBOU, ME	RPG MSCF BDDS	CAR	WN9712
CHARLESTON, SC	CHARLESTON, SC	RPG MSCF BDDS	CHS	WN9208
CHARLESTON, WV	CHARLESTON, WV	RPG MSCF BDDS	RLX	WN9414
CINCINNATI	WILMINGTON, OH	RPG MSCF BDDS	ILN	WN9710
CLEVELAND	CLEVELAND, OH	RPG MSCF BDDS	CLE	WN9524
COLUMBIA	WEST COLUMBIA, SC	RPG MSCF BDDS	CAE	WN9310
GREER	GREER, SC	RPG MSCF BDDS	GSP	WN9312

ATTACHMENT 8 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MOREHEAD CITY	NEWPORT, NC	RPG MSCF BDDS	MHX	WN9307
NORFOLK	WAKEFIELD, VA	RPG	AKQ	WN9952
DOVER AFB	WAKEFIELD, VA	MSCF	AKQ	WN9952
NORFOLK	WAKEFIELD, VA	MSCF BDDS	AKQ	WN9952
PHILADELPHIA	MOUNT HOLLY, NJ	RPG MSCF BDDS	PHI	WN9950
PITTSBURGH	CORAOPOLIS, PA	RPG MSCF BDDS	PBZ	WN9917
PORTLAND, ME	GRAY, ME	RPG MSCF BDDS	GYX	WN9938
RALEIGH/DURHAM	RALEIGH, NC	RPG MSCF BDDS	RAH	WN9306
ROANOKE	BLACKSBURG, VA	RPG MSCF BDDS	RNK	WN9954

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
STATE COLLEGE	STATE COLLEGE, PA	RPG MSCF BDDS	CTP	WN9925
STERLING	STERLING, VA	RPG MSCF BDDS	LWX	WN9931
WILMINGTON	WILMINGTON, NC	RPG MSCF BDDS	ILM	WN9301
Southern Region				
ALBUQUERQUE	ALBUQUERQUE, NM	RPG MSCF	ABQ	WP9365
CANNON AFB	ALBUQUERQUE, NM	MSCF	ABQ	WP9365
ALBUQUERQUE	ALBUQUERQUE, NM	BDDS	ABQ	WP9365
AMARILLO	AMARILLO, TX	RPG MSCF BDDS	AMA	WP9363
ATLANTA	PEACHTREE CITY, GA	RPG MSCF	FFC	WP9219
ROBINS AFB	PEACHTREE CITY, GA	MSCF	FFC	WP9219
ATLANTA	PEACHTREE CITY, GA	BDDS	FFC	WP9219

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
AUSTIN/SAN ANTONIO	NEW BRAUNFELS, TX	RPG MSCF	EWX	WP9253
LAUGHLIN AFB	NEW BRAUNFELS, TX	MSCF	EWX	WP9253
AUSTIN/SAN ANTONIO	NEW BRAUNFELS, TX	BDDS	EWX	WP9253
BIRMINGHAM	ALABASTER, AL	RPG MSCF	BMX	WP9957
MAXWELL AFB	ALABASTER, AL	MSCF	BMX	WP9957
BIRMINGHAM	ALABASTER, AL	BDDS	BMX	WP9957
BROWNSVILLE	BROWNSVILLE, TX	RPG MSCF BDDS	BRO	WP9250
CORPUS CHRISTI	CORPUS CHRISTI, TX	RPG MSCF BDDS	CRP	WP9251
DALLAS/FT WORTH	FORT WORTH, TX	RPG MSCF	FWD	WP9259
FT HOOD	FORT WORTH, TX	MSCF	FWD	WP9259
DALLAS/FT WORTH	FORT WORTH, TX	BDDS	FWD	WP9259
EL PASO	SANTA TERESA, NM	RPG MSCF	EPZ	WP9270
HOLLOMAN AFB	SANTA TERESA, NM	MSCF	EPZ	WP9270
EL PASO	SANTA TERESA, NM	BDDS	EPZ	WP9270

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
HOUSTON	DICKINSON, TX	RPG MSCF BDDS	HGX	WP9935
JACKSON/BRANDON, MS	JACKSON, MS	RPG	JAN	WP9235
COLUMBUS AFB	JACKSON, MS	MSCF	JAN	WP9235
JACKSON/BRANDON, MS	JACKSON, MS	MSCF BDDS	JAN	WP9235
JACKSONVILLE	JACKSONVILLE, FL	RPG MSCF	JAX	WP9206
MOODY AFB	JACKSONVILLE, FL	MSCF	JAX	WP9206
JACKSONVILLE	JACKSONVILLE, FL	BDDS	JAX	WP9206
KEY WEST	BOCA CHICA KEY, FL	RPG MSCF BDDS	EYW	WP9201
KNOXVILLE	MORRISTOWN, TN	RPG MSCF BDDS	MRX	WP9325
LAKE CHARLES	LAKE CHARLES, LA	RPG	LCH	WP9240
FT POLK	LAKE CHARLES, LA	MSCF	LCH	WP9240
LAKE CHARLES	LAKE CHARLES, LA	MSCF BDDS	LCH	WP9240

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
LITTLE ROCK	NORTH LITTLE ROCK, AR	RPG MSCF BDDS	LZK	WP9340
LUBBOCK	LUBBOCK, TX	RPG MSCF BDDS	LUB	WP9933
MELBOURNE	MELBOURNE, FL	RPG MSCF BDDS	MLB	WP9204
MEMPHIS	MEMPHIS, TN	RPG MSCF BDDS	MEG	WP9334
MIAMI	MIAMI, FL	RPG MSCF BDDS	MFL	WP9918
MIDLAND/ODESSA	MIDLAND, TX	RPG MSCF BDDS	MAF	WP9265
MOBILE	MOBILE, AL	RPG	MOB	WP9223
EGLIN AFB	MOBILE, AL	MSCF	MOB	WP9223
MOBILE	MOBILE, AL	MSCF BDDS	MOB	WP9223

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
NASHVILLE	OLD HICKORY, TN	RPG MSCF BDDS	OHX	WP9327
NORMAN	NORMAN, OK	RPG	OUN	WP9921
ALTUS AFB	NORMAN, OK	MSCF	OUN	WP9921
NORMAN	NORMAN, OK	MSCF	OUN	WP9921
VANCE AFB	NORMAN, OK	MSCF	OUN	WP9921
NORMAN	NORMAN, OK	BDDS	OUN	WP9921
NORTHEAST ALABAMA	HUNTSVILLE, AL	RPG MSCF BDDS	HUN	WP9914
SAN ANGELO	SAN ANGELO, TX	RPG	SJT	WP9263
DYESS AFB	SAN ANGELO, TX	MSCF	SJT	WP9263
SAN ANGELO	SAN ANGELO, TX	MSCF BDDS	SJT	WP9263
SAN JUAN FAA	SAN JUAN, PR	MSCF	SJU	WP9526
SHREVEPORT	SHREVEPORT, LA	RPG MSCF BDDS	SHV	WP9248
SLIDELL	SLIDELL, LA	RPG MSCF BDDS	LIX	WP9919

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
TALLAHASSEE	TALLAHASSEE, FL	RPG	TAE	WP9214
FT RUCKER	TALLAHASSEE, FL	MSCF	TAE	WP9214
TALLAHASSEE	TALLAHASSEE, FL	MSCF BDDS	TAE	WP9214
TAMPA	RUSKIN, FL	RPG MSCF BDDS	TBW	WP9961
TULSA	TULSA, OK	RPG	TSA	WP9356
WESTERN ARKANSAS	TULSA, OK	RPG	TSA	WP9356
TULSA	TULSA, OK	MSCF	TSA	WP9356
WESTERN ARKANSAS	TULSA, OK	MSCF	TSA	WP9356
TULSA	TULSA, OK	BDDS	TSA	WP9356
WESTERN ARKANSAS	TULSA, OK	BDDS	TSA	WP9356

Central Region

ABERDEEN	ABERDEEN, SD	RPG MSCF BDDS	ABR	WR9659
BISMARCK	BISMARCK, ND	RPG MSCF	BIS	WR9764
MINOT AFB	BISMARCK, ND	MSCF	BIS	WR9764
BISMARCK	BISMARCK, ND	BDDS	BIS	WR9764

ATTACHMENT 8 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CHEYENNE	CHEYENNE, WY	RPG MSCF BDDS	CYS	WR9564
CHICAGO	ROMEIOVILLE, IL	RPG MSCF BDDS	LOT	WR9969
DENVER	BOULDER, CO	RPG MSCF BDDS	BOU	WR9469
DES MOINES	JOHNSTON, IA	RPG MSCF BDDS	DMX	WR9546
DETROIT	WHITE LAKE, MI	RPG MSCF BDDS	DTX	WR9954
DODGE CITY	DODGE CITY, KS	RPG MSCF BDDS	DDC	WR9451
DULUTH	DULUTH, MN	RPG MSCF BDDS	DLH	WR9745
EVANSVILLE,IN	PADUCAH, KY	RPG	PAH	WR9957

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
PADUCAH	PADUCAH, KY	RPG	PAH	WR9957
EVANSVILLE,IN	PADUCAH, KY	MSCF	PAH	WR9957
FT CAMPBELL	PADUCAH, KY	MSCF	PAH	WR9957
PADUCAH	PADUCAH, KY	MSCF	PAH	WR9957
EVANSVILLE,IN	PADUCAH, KY	BDDS	PAH	WR9957
PADUCAH	PADUCAH, KY	BDDS	PAH	WR9957
FARGO/GRAND FORKS	GRAND FORKS, ND	RPG	FGF	WR9750
		MSCF		
		BDDS		
GOODLAND	GOODLAND, KS	RPG	GLD	WR9465
		MSCF		
		BDDS		
GRAND ISLAND	HASTINGS, NE	RPG	GID	WR9552
		MSCF		
		BDDS		
GRAND JUNCTION	GRAND JUNCTION, CO	RPG	GJT	WR9476
		MSCF		
		BDDS		
GRAND RAPIDS	GRAND RAPIDS, MI	RPG	GRR	WR9635
		MSCF		
		BDDS		

ATTACHMENT 8 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
GREEN BAY	GREEN BAY, WI	RPG MSCF BDDS	GRB	WR9645
INDIANAPOLIS	INDIANAPOLIS, IN	RPG MSCF BDDS	IND	WR9438
JACKSON, KY	JACKSON, KY	RPG MSCF BDDS	JKL	WR9956
LA CROSSE	LA CROSSE, WI	RPG MSCF BDDS	ARX	WR9643
LINCOLN	LINCOLN, IL	RPG MSCF BDDS	ILX	WR9436
LOUISVILLE	LOUISVILLE, KY	RPG MSCF BDDS	LMK	WR9423
MARQUETTE	NEGAUNEE, MI	RPG MSCF BDDS	MQT	WR9743

ATTACHMENT 8 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MILWAUKEE	DOUSMAN, WI	RPG MSCF BDDS	MKX	WR9965
MINNEAPOLIS	CHANHASSEN, MN	RPG MSCF BDDS	MPX	WR9658
NCL MICHIGAN	GAYLORD, MI	RPG MSCF BDDS	APX	WR9610
NORTH PLATTE	NORTH PLATTE, NE	RPG MSCF BDDS	LBF	WR9562
NORTHERN INDIANA	NORTH WEBSTER, IN	RPG MSCF BDDS	IWX	WR9534
OMAHA	VALLEY, NE	RPG MSCF BDDS	OAX	WR9553
PLEASANT HILL	PLEASANT HILL, MO	RPG MSCF BDDS	EAX	WR9446

ATTACHMENT 8 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
PUEBLO	PUEBLO, CO	RPG MSCF BDDS	PUB	WR9464
QUAD CITIES	DAVENPORT, IA	RPG MSCF BDDS	DVN	WR9544
RAPID CITY	RAPID CITY, SD	RPG MSCF BDDS	UNR	WR9662
RIVERTON/LANDER	RIVERTON, WY	RPG MSCF BDDS	RIW	WR9576
SIOUX FALLS	SIOUX FALLS, SD	RPG MSCF BDDS	FSD	WR9651
SPRINGFIELD	SPRINGFIELD, MO	RPG MSCF BDDS	SGF	WR9440
ST LOUIS	WELDON SPRING, MO	RPG MSCF BDDS	LSX	WR9971

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
TOPEKA	TOPEKA, KS	RPG MSCF BDDS	TOP	WR9456
WICHITA	WICHITA, KS	RPG MSCF BDDS	ICT	WR9450
Western Region				
BILLINGS	BILLINGS, MT	RPG MSCF BDDS	BYZ	WT9677
BOISE	BOISE, ID	RPG MSCF BDDS	BOI	WT9681
CEDAR CITY	SALT LAKE CITY, UT	RPG	SLC	WT9932
SALT LAKE CITY	SALT LAKE CITY, UT	RPG	SLC	WT9932
CEDAR CITY	SALT LAKE CITY, UT	MSCF	SLC	WT9932
SALT LAKE CITY	SALT LAKE CITY, UT	MSCF	SLC	WT9932
CEDAR CITY	SALT LAKE CITY, UT	BDDS	SLC	WT9932
SALT LAKE CITY	SALT LAKE CITY, UT	BDDS	SLC	WT9932

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ELKO	ELKO, NV	RPG MSCF BDDS	LKN	WT9903
EUREKA (BUNKER HILL)	EUREKA, CA	RPG MSCF BDDS	EKA	WT9594
FLAGSTAFF	BELLEMONT, AZ	RPG MSCF BDDS	FGZ	WT9375
GLASGOW	GLASGOW, MT	RPG MSCF BDDS	GGW	WT9768
GREAT FALLS	GREAT FALLS, MT	RPG MSCF BDDS	TFX	WT9950
LAS VEGAS EDWARDS AFB LAS VEGAS	LAS VEGAS, NV LAS VEGAS, NV LAS VEGAS, NV	RPG MSCF MSCF BDDS	VEF VEF VEF	WT9386 WT9386 WT9386
LOS ANGELES	OXNARD, CA	RPG MSCF BDDS	LOX	WT9295

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MEDFORD	MEDFORD, OR	RPG MSCF BDDS	MFR	WT9597
MISSOULA	MISSOULA, MT	RPG MSCF BDDS	MSO	WT9773
PENDLETON	PENDLETON, OR	RPG MSCF BDDS	PDT	WT9688
PHOENIX	PHOENIX, AZ	RPG	PSR	WT9278
YUMA	PHOENIX, AZ	RPG	PSR	WT9278
PHOENIX	PHOENIX, AZ	MSCF	PSR	WT9278
YUMA	PHOENIX, AZ	MSCF	PSR	WT9278
PHOENIX	PHOENIX, AZ	BDDS	PSR	WT9278
YUMA	PHOENIX, AZ	BDDS	PSR	WT9278
POCATELLO	POCATELLO, ID	RPG MSCF BDDS	PIH	WT9578
PORTLAND, OR	PORTLAND, OR	RPG MSCF BDDS	PQR	WT9698

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
RENO	RENO, NV	RPG MSCF BDDS	REV	WT9488
SACRAMENTO BEALE AFB SACRAMENTO	SACRAMENTO, CA SACRAMENTO, CA SACRAMENTO, CA	RPG MSCF MSCF BDDS	STO STO STO	WT9914 WT9914 WT9914
SAN DIEGO SANTA ANA MTS SAN DIEGO SANTA ANA MTS SAN DIEGO SANTA ANA MTS SAN FRANCISCO	SAN DIEGO, CA SAN DIEGO, CA SAN DIEGO, CA SAN DIEGO, CA SAN DIEGO, CA SAN DIEGO, CA MONTEREY, CA	RPG RPG MSCF MSCF BDDS BDDS RPG MSCF BDDS	SGX SGX SGX SGX SGX SGX MTR	WT9918 WT9918 WT9918 WT9918 WT9918 WT9918 WT9933
SAN JOAQUIN VALY	HANFORD, CA	RPG MSCF BDDS	HNX	WT9389
SEATTLE	SEATTLE, WA	RPG MSCF BDDS	SEW	WT9922

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SPOKANE	SPOKANE, WA	RPG MSCF BDDS	OTX	WT9785
TUCSON	TUCSON, AZ	RPG MSCF BDDS	TWC	WT9274
Alaskan Region				
ANCHORAGE FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
BETHEL FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
KING SALMON FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
MIDDLETON ISLAND	ANCHORAGE, AK	MSCF	AFC	WV9904
FAIRBANKS FAA	FAIRBANKS, AK	MSCF	AFG	WV9261
NOME FAA	FAIRBANKS, AK	MSCF	AFG	WV9261
SITKA FAA	JUNEAU, AK	MSCF	AJK	WV9381
Pacific Region				
ANDERSEN AFB	AGANA, GU	MSCF	GUM	WW9902
KAMUELA/KOHALA APT	HONOLULU, HI	MSCF	HFO	WW9182
MOLOKAI FAA	HONOLULU, HI	MSCF	HFO	WW9182
SOUTH KAUAI	HONOLULU, HI	MSCF	HFO	WW9182

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SOUTH SHORE FAA	HONOLULU, HI	MSCF	HFO	WW9182
Miscellaneous				
FSL BOULDER TEST RPG	BOULDER, CO	RPG	FSL	
NRC #1	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #2	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #1	KANSAS CITY, MO	MSCF	NRCM7	WG9163
NRC #2	KANSAS CITY, MO	MSCF	NRCM7	WG9163
NRC #1	KANSAS CITY, MO	BDDS	NRCM7	WG9163
NWSHQ TESTBED	SILVER SPRING, MD	RPG		WG9310
NWSHQ TESTBED	SILVER SPRING, MD	MSCF		WG9310
NWSHQ TESTBED	SILVER SPRING, MD	BDDS		WG9310
WDTB RPG	NORMAN, OK	RPG		WG9410
ROC6 (ORDA Testing)	NORMAN, OK	RPG		WG9410
ROC5 HOTLINE	NORMAN, OK	RPG		WG9410
ROC4 NWS RPG	NORMAN, OK	RPG		WG9410
ROC3 NWS RPG	NORMAN, OK	RPG		WG9410
OSF-3 (RPG/KOHLER GEN)	NORMAN, OK	RPG	OSFO2	WG9410
ROC4 NWS RPG	NORMAN, OK	MSCF		WG9410
ROC5 HOTLINE	NORMAN, OK	MSCF		WG9410
ROC6	NORMAN, OK	MSCF		WG9410
WDTB	NORMAN, OK	MSCF		WG9410

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ROC DOD RPG (KREX)	NORMAN, OK	MSCF		WG9420
ROC3 NWS RPG	NORMAN, OK	MSCF		WG9410
WDTB	NORMAN, OK	BDDS		WG9410
ROC6	NORMAN, OK	BDDS		WG9410
ROC5 HOTLINE	NORMAN, OK	BDDS		WG9410
ROC4 NWS RPG	NORMAN, OK	BDDS		WG9410
ROC3 NWS RPG	NORMAN, OK	BDDS		WG9410
PRC RPG	RESTON, MD	RPG	PRCV2	WG9310
		MSCF		
		BDDS		
SHANGHAI, CHINA	SHANGHAI,	RPG		
TAIPEI, TAIWAN	TAIPEI,	RPG		
TRAINING CENTER #1 NWSTC	KANSAS CITY, MO	RPG	TTCM7	WB9612
TRAINING CENTER #2 NWSTC	KANSAS CITY, MO	RPG	TTCM7	WB9612
TRAINING CENTER #1 NWSTC	KANSAS CITY, MO	MSCF	TTCM7	WB9612
		BDDS		
DoD				
ALTUS AFB	FREDERICK, OK	RPG	FDR	FE4419
		BDDS		

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ANDERSEN AFB	ANDERSEN AFB, GU	RPG BDDS	UAM	FE5240
BEALE AFB	OROVILLE, CA	RPG BDDS	BBX	FE4686
CAMP HUMPHREYS	YOKOTA AB, JA	MSCF		
KADENA AB	YOKOTA AB, JA	MSCF		
KUNSAN AB	YOKOTA AB, JA	MSCF		
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RPG BDDS	KSGR4	FI5294
CANNON AFB	FIELD, NM	RPG BDDS	FDX	FE4855
COLUMBUS AFB	GREENWOOD SPRINGS, MS	RPG BDDS	GWX	FE3022
DOVER AFB	ELLENDALE STATE FOREST, DE	RPG BDDS	DOX	FE4497
DYESS AFB	MORAN, TX	RPG BDDS	DYX	FE4661
EDWARDS AFB	BORON, CA	RPG BDDS	EYX	FE2805
EGLIN AFB	RED BAY, FL	RPG BDDS	EVX	FE2823

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
FT CAMPBELL	TRENTON, KY	RPG BDDS	HPX	FY4812
FT DRUM	MONTAGUE, NY	RPG BDDS	TYX	FY4846
FT HOOD	GRANGER, TX	RPG BDDS	GRK	FY4824
FT POLK	FT POLK, LA	RPG BDDS	POE	FY4825
FT RUCKER	ECHO, AL	RPG BDDS	EOX	FY4805
HOLLOMAN AFB	RUIDOSO, NM	RPG BDDS	HDX	FE4801
KADENA AB	KADENA AB, JA	RPG BDDS	ODNR5	FH5270
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB OPS TRNG	D'IBERVILLE, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	MSCF BDDS	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	MSCF BDDS	BIX	FE3010
KUNSAN AB	KUNSAN AB, KO	RPG BDDS	KJKR4	FH5284

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
LAJES AB	SANTA BARBARA, AZR	RPG MSCF BDDS	PLAL3	FE4486
LAUGHLIN AFB	BRACKETVILLE, TX	RPG BDDS	DFX	FE3099
MAXWELL AFB	CARRVILLE, AL	RPG BDDS	MXX	FE3300
MINOT AFB	DEERING, ND	RPG BDDS	MBX	FE4528
MOODY AFB	SOUTH STOCKTON, GA	RPG BDDS	VAX	FE4830
ROC DOD RPG (KREX)	NORMAN, OK	RPG		WG9420
ROBINS AFB	JEFFERSONVILLE, GA	RPG BDDS	JGX	FE2067
VANCE AFB	CHEROKEE, OK	RPG BDDS	VNX	FE3029
VANDENBERG AFB	ORCUTT, CA	RPG MSCF BDDS	VBX	FE4610

ATTACHMENT 8 (Continued)

EFFECTIVITY

FAA

NEXRAD Site Name	City, ST	EQP	LOCID	ORG Code
ANCHORAGE FAA (RPG 2)	KENAI, AK	RPG	ENA	6901AJ
ANCHORAGE FAA (RPG 1)	KENAI, AK	RPG	ENA	6901AJ
BETHEL FAA (RPG 2)	BETHEL, AK	RPG	BET	690112
BETHEL FAA (RPG 1)	BETHEL, AK	RPG	BET	690112
FAA RPG 1 PSF AT OKC	OKC, OK	RPG		
FAA RPG 2 PSF AT OKC	OKC, OK	RPG		
FAIRBANKS FAA (RPG 2)	FAIRBANKS, AK	RPG	PDQ	690178
FAIRBANKS FAA (RPG 1)	FAIRBANKS, AK	RPG	PDQ	690178
KAMUELA/KOHALA APT(RPG 2)	KAMUELA, HI	RPG	UPP	699235
KAMUELA/KOHALA APT(RPG 1)	KAMUELA, HI	RPG	UPP	699235
KING SALMON FAA (RPG 2)	KING SALMON, AK	RPG	AKN	690137
KING SALMON FAA (RPG 1)	KING SALMON, AK	RPG	AKN	690137
MIDDLETON ISLAND (RPG 2)	MIDDLETON ISLAND, AK	RPG	MDO	690140
MIDDLETON ISLAND (RPG 1)	MIDDLETON ISLAND, AK	RPG	MDO	690140
MOLOKAI FAA (RPG 2)	MOLOKAI, HI	RPG	MKK	699213
MOLOKAI FAA (RPG 1)	MOLOKAI, HI	RPG	MKK	699213
NOME FAA (RPG 2)	NOME, AK	RPG	OME	690147
NOME FAA (RPG 1)	NOME, AK	RPG	OME	690147
ROC FAA REDUNDANT (RPG 2)	NORMAN, OK	RPG	OSFO2	WG9410
ROC FAA REDUNDANT (RPG 1)	NORMAN, OK	RPG	OSFO2	WG9410
ROC FAA REDUNDANT	NORMAN, OK	MSCF	OSFO2	WG9410

ATTACHMENT 8 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	LOCID	ORG Code
SAN JUAN FAA (RPG 2)	SAN JUAN, PR	RPG	SJU	69F362
SAN JUAN FAA (RPG 1)	SAN JUAN, PR	RPG	SJU	69F362
SITKA FAA (RPG 2)	BIORKA ISLAND, AK	RPG	BJA	690141
SITKA FAA (RPG 1)	BIORKA ISLAND, AK	RPG	BJA	690141
SOUTH KAUAI FAA (RPG 2)	SOUTH KAUAI, HI	RPG	SOK	699211
SOUTH KAUAI FAA (RPG 1)	SOUTH KAUAI, HI	RPG	SOK	699211
SOUTH SHORE FAA (RPG 2)	NAALEHU, HI	RPG	H125	699201
SOUTH SHORE FAA (RPG 1)	NAALEHU, HI	RPG	H125	699201

ATTACHMENT 9

RPG GROUP SOFTWARE BUILD 6.0 LOAD COMPLETION FORM

DoD and FAA only will complete this form
NWS: Report Completion in EMRS Only

Site Name: _____

Site Identifier: _____

Total Time to Complete this Modification Document: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Equipment Modified (SID) RPG _____ MSCF _____ (R)BDDS _____
FAA Only: RPG(2) _____

Problem(s) Encountered:

Upon completion of this form, return the information to the ROC using one of the four methods below:

1. Mailing Address: Program Branch, Configuration Management Team
WSR-88D Radar Operations Center
3200 Marshall Ave., Suite 101
Norman, OK 73072-8028
2. FAX Number: (405) 573-3480
ATTN: Configuration Management Team
3. E-mail Address: NEXRAD.CM.comments@noaa.gov
4. Web Version: <http://www.roc.noaa.gov/ssb/logistics/completion.asp>

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 10

SAMPLE EMRS PAGE - RPG

A26 Detail Form - ESCM2, SILVER SPRING, MD :: JOHN MERHI - Microsoft Internet Explorer											
New A26 Commit A26 Place on Hold Copy A26 Delete A26 Detail Report Document Summary Help											
GENERAL INFORMATION											
NEW RECORD WFO* HUN Document No. * HUN40715000											
1. Open Date 07/15/2004		Open Time 08:00		2. Op Initials WSH		3. Response Priority <input type="radio"/> Immediate <input type="radio"/> Low <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable		4. Close Date 07/15/2004		Close Time 10:30	
5. Maintenance Description 444 characters left RADAR, WSR-88D Install Radar Product Generator Group Software Build 6.0											
EQUIPMENT INFORMATION											
6. Station ID* HUN		7. Equipment Code RPG		8. Serial Number DC180		9. TM M		10. AT M		11. How Mal 999	
Alert: Time Remaining: 2:30 (For Block 12 use only)											
12. EQUIPMENT OPERATIONAL STATUS TIMES											
a. Fully Operational Hours Minutes <input type="text"/> <input type="text"/>		b. Logistic Delay Hours Minutes <input type="text"/> <input type="text"/>		c. All Other Hours Minutes <input type="text"/> <input type="text"/>		d. Logistic Delay Hours Minutes <input type="text"/> <input type="text"/>		e. All Other Hours Minutes <input type="text"/> <input type="text"/>			
13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING											
ASN		Vendor Part No. (New Part)		Serial Number (Old Part)		Serial Number (New Part)		New Row			
<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		Delete Row			
14. WORKLOAD INFORMATION											
a. Routine Hours Minutes <input type="text"/> <input type="text"/>		b. Non-Routine Hours Minutes <input type="text"/> <input type="text"/>		c. Travel Hours Minutes <input type="text"/> <input type="text"/>		d. Misc Hours Minutes <input type="text"/> <input type="text"/>		e. Overtime Hours Minutes <input type="text"/> <input type="text"/>			
MISCELLANEOUS INFORMATION											
15. Maintenance Comments 687 characters left Installed RPG software Build 6.0 I.A.W. NEXRAD Software Note 27											
16. Tech Initials BLB											
17. SPECIAL PURPOSE REPORTING INFORMATION											
a. Mod No. S27		b. Mod Act/Deact Date 07/15/2004		c. Block C <input type="text"/>		d. Trouble Ticket No. <input type="text"/>		e. Block E <input type="text"/>			

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 10 (Continued)

SAMPLE EMRS PAGE - MSCF

A26 Detail Form - ESCM2, SILVER SPRING, MD :: JOHN MERHI - Microsoft Internet Explorer											
New A26 Commit A26 Place on Hold Copy A26 Delete A26 Detail Report Document Summary Help											
GENERAL INFORMATION											
NEW RECORD WFO* HUN Document No.* HUN40715000											
1. Open Date 07/15/2004		Open Time 11:00		2. Op Initials WSH		3. Response Priority <input type="radio"/> Immediate <input type="radio"/> Low <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable		4. Close Date 07/15/2004		Close Time 12:00	
5. Maintenance Description 444 characters left RADAR, WSR-88D Install Radar Product Generator Group Software Build 6.0											
EQUIPMENT INFORMATION											
6. Station ID* HUN		7. Equipment Code MSCF		8. Serial Number M4162		9. TM M		10. AT M		11. How Mal 999	
Alert: Time Remaining: 1:00 (For Block 12 use only)											
12. EQUIPMENT OPERATIONAL STATUS TIMES											
a. Fully Operational Hours Minutes <input type="text"/> <input type="text"/>		Partially Operational b. Logistic Delay c. All Other Hours Minutes Hours Minutes <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>				Not Operational d. Logistic Delay e. All Other Hours Minutes Hours Minutes <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>					
13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING											
ASN		Vendor Part No. (New Part)		Serial Number (Old Part)		Serial Number (New Part)		New Row		Delete Row	
<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>					
14. WORKLOAD INFORMATION											
a. Routine Hours Minutes <input type="text"/> <input type="text"/>		b. Non-Routine Hours Minutes <input type="text"/> <input type="text"/>		c. Travel Hours Minutes <input type="text"/> <input type="text"/>		d. Misc Hours Minutes 1 00		e. Overtime Hours Minutes <input type="text"/> <input type="text"/>			
MISCELLANEOUS INFORMATION											
15. Maintenance Comments 687 characters left Installed RPG software Build 6.0 I.A.W. NEXRAD Software Note 27											
16. Tech Initials BLB											
17. SPECIAL PURPOSE REPORTING INFORMATION											
a. Mod No. S27		b. Mod Act/Deact Date 07/15/2004		c. Block C <input type="text"/>		d. Trouble Ticket No. <input type="text"/>		e. Block E <input type="text"/>			

NWS: EHB-6, Software Note 27
DoD: TO 31P1-4-108-630
FAA: EEM Modification Handbook 6345.1 CHG 57, Chap 52

ATTACHMENT 10 (Continued)

SAMPLE EMRS PAGE - BDDS

A26 Detail Form - ESCM2, SILVER SPRING, MD :: JOHN MERHI - Microsoft Internet Explorer									
New A26 Commit A26 Place on Hold Copy A26 Delete A26 Detail Report Document Summary Help									
GENERAL INFORMATION									
NEW RECORD WFO* HUN Document No. * HUN40715000									
1. Open Date	Open Time	2. Op Initials	3. Response Priority		4. Close Date	Close Time			
07/15/2004	13:00	WSH	<input type="radio"/> Immediate <input type="radio"/> Low <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable		07/15/2004	14:00			
5. Maintenance Description 444 characters left RADAR, WSR-88D									
Install Radar Product Generator Group Software Build 6.0									
EQUIPMENT INFORMATION									
6. Station ID*	7. Equipment Code	8. Serial Number		9. TM	10. AT	11. How Mal			
HUN	BDDS	001		M	M	999			
Alert: Time Remaining: 1:00 (For Block 12 use only)									
12. EQUIPMENT OPERATIONAL STATUS TIMES									
a. Fully Operational		b. Logistic Delay		c. All Other		d. Logistic Delay		e. All Other	
Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes		
13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING									
ASN	Vendor Part No. (New Part)	Serial Number (Old Part)	Serial Number (New Part)	New Row					
				Delete Row					
14. WORKLOAD INFORMATION									
a. Routine		b. Non-Routine		c. Travel		d. Misc		e. Overtime	
Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes	Hours Minutes		
					1 0				
MISCELLANEOUS INFORMATION									
15. Maintenance Comments 687 characters left									
Installed RPG software Build 6.0 I.A.W. NEXRAD Software Note 27									
16. Tech Initials									
BLB									
17. SPECIAL PURPOSE REPORTING INFORMATION									
a. Mod No.	b. Mod Act/Deact Date	c. Block C	d. Trouble Ticket No.	e. Block E					
S27	07/15/2004								

